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ORIGINAL ARTICLES.

CATHETER LIFE, AND SOME REMARKS ON THE ETIOLOGY OF HYPERTROPHY OF THE PROSTATE GLAND.¹

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SIR HENRY THOMPSON states that an enlargement of the prostate gland of moderate degree occurs in one out of every three males who reach middle age; (2) that twenty per cent. of all men have fibrous tumors of the prostate previous to the fiftieth year of life; (3) that after the age of fifty years one man in every eight has marked enlargement of this gland, and finally (4), that the disease rarely begins later than the seventy-fifth year of life. Reginald Harrison states that one-third of the male population of the world who have passed the age of fifty-five years are the subjects of prostatic hypertrophy. The question naturally arises, why should the health of such a large proportion of men begin to be undermined by a harassing, and sometimes alarming, series of symptoms, at a period of life when they ought to be the most comfortable, and capable of their greatest and best work? There must be some cause, very general in its application, and it has been attempted to discover this in the analogy between these pathologic conditions of the prostate and fibroid degenerations of the uterus. I think a sufficient objection to this proposition is found in the very fact that while so many men begin to suffer from the affection in question when on the "down hill" side of life, the great majority of females, on the contrary, after forty-five years of age, enjoy a condition of comfort, and go on to an equable, satisfactory old age. Moreover, the function of the two organs is entirely dissimilar, and, as might be expected, the pathologic conditions, with the exception of the cases in which fibroid tumors have developed, are also entirely dissimilar.

In the great majority of cases of hypertrophied prostate the disease begins and remains in the glandular tissue, the other structures becoming secondarily involved. This view explains the absorption of the prostate which occurs in some cases after its function has been abrogated by the operation of castra-

tion. From these considerations, and from careful observation extending over several years, I am warranted in the statement that the first steps in enlargement of the prostate take place in youth. Admitting that general systemic conditions such as gout, rheumatism, and general atherosclerosis may account for some cases, I claim that the chronic irritation and hyperemia, due to excessive function of the gland, often commencing in early life, and maintained during the vigorous period of existence, is sufficient to account for the largest proportion of those who suffer from this malady. It is interesting to find what a history may be developed by careful cross-questioning, even when it would be least expected, of some excessive or unphysiologic use of the prostate, which, starting in youth from ignorance, extends all the way through life to the time when symptoms, more or less severe, call attention to the existence of a urinary affection, and compel such a one to seek the aid of a physician. The subject is so immense and so complicated that in the limited time allotted me it can only be lightly touched, leaving to some subsequent occasion its consideration in detail.

Some, and occasionally all of the following elements enter into the etiology of hypertrophied prostate: (1) the habit of masturbation during childhood, caused either by some local irritation or by the teachings of bad companions; (2) possible and probable associations in the developmental years (that is, from twelve to twenty) with lewd women; or, the ignorant and foolish associations of young persons of the opposite sexes in which the male, though wrong is not intended, is kept in a state of constant or frequently recurring sexual excitement; (3) then, according to the moral status of the individual, follows (or accompanies) adultery or fornication, usually under the conditions of alcoholic stimulation and licentiousness; (4) if marriage occurs, these habits being already established, there is invariably excess. Subsequently there is apt to be objection to the birth of children, and then some unnatural or unphysiologic expedient to prevent conception is resorted to, generally on the part of the male, and this is persisted in oftentimes during years, until symptoms arise which call the attention of the subject to his sexual apparatus. At this period the symptoms may be of a minor grade, and, an intermission in the habits taking place, graver

¹ Read at the Ninety-second Annual Meeting of the Medical Society of the State of New York, held at Albany, N. Y., January 25, 26, and 27, 1898.

symptoms are not presented until later in life, although in the meantime the hyperemia, which has existed from youth, has caused the gradual development of the tissues composing the prostate. Even at this point in the individual's life, if the advice of the physician is sought, a greater or lesser degree of prostatic enlargement will be found to be present. Therefore, I believe that I am correct in the observation that a certain degree of hypertrophy of the prostate is present in many men long before it is suspected. Although surgeons have not considered it generally necessary to explore the bladder of young men (say about forty years of age) for residual urine, they have often been surprised to find many men retaining a small but varying proportion of the contents of the bladder. In some of these cases it cannot be said that at this period of life a self-perpetuating enlargement is presented, because, in many, treatment is successful, and it is even possible by proper remedial applications to effect a reduction in the size of the already enlarged gland, but if the presence of residual urine is to be regarded as one of the symptoms of hypertrophy of the prostate, this condition will be found present oftener than is suspected.

Usually the first evidence of the existence of prostatic hypertrophy is a sense of irritation at or about the neck of the bladder and some variation from the normal sexual condition. Such a patient may at times experience a sense of fulness in the perineum, but unless there has been an acute inflammation of the prostatic urethra there is usually no pain incident to the early stages of this affection. As time goes on a slight increase in frequency of urination may be noticed, and also a little tardiness in starting the urine. The stream of urine is not usually changed in volume, although at times it may be somewhat smaller than usual, and this fact should be borne in mind in differentiating this affection from stricture of the urethra. Gradually, with occasional intercurrent exacerbations, the calls to urinate become more frequent, but following micturition there is a sense of relief, and the individual is not aware that he does not completely empty the bladder and that the latter is gradually becoming fuller and fuller. At this time he may complain of a dull pain over the sacrum or in the lumbar region, which is generally treated as "rheumatism" by means of domestic remedies. Still later the bladder becomes distended, the hydrostatic pressure gradually thins its muscular layers, and there is now more or less atony of this viscus, as manifested by a slow, feeble, dribbling stream of urine. There may also be a relaxation of the cut-off muscles surrounding the neck of the bladder and prostatic urethra.

This permits a small quantity of urine to enter the urethra, and then there may be a constant and tormenting desire to urinate, with perhaps involuntary evacuations of a few drops, or even a decided "overflow." The latter is apt to take place at night, during the relaxation of sleep, and the individual has the added misfortune and mortification of wetting his bed. At this juncture, if not before, medical advice is usually sought, and the question arises in the mind of the attending physician,—what is the cause of this frequency and perhaps involuntary urination? It will not do to say that such a patient has "incontinence of urine," and prescribe alkalies and diuretics, for these would only make matters worse by increasing the volume of fluid in the already over-distended bladder.

If an adult presents the series of symptoms which have been narrated, and especially if he has the nocturnal involuntary urination, a careful and discriminating diagnosis must be made; for these symptoms point to some obstruction which the bladder has long been endeavoring to overcome. Stricture of the urethra must be excluded by eliciting the patient's history, and by a careful and aseptic exploration of the urethra with the *bougie à boule* and sound. The latter may take the place of a searcher at this point in the examination and furnish evidence of an obstruction at the neck of the bladder, either by failure to enter the viscus, or by the amount of rotation or depression of the handle required before feeling its point free in the bladder. In general, a searcher after the Sir Henry Thompson pattern is the best exploring instrument, and will often enable the physician to outline the prostate with great accuracy. The passage of a catheter into the bladder, and the discovery of a varying amount of urine remaining after the patient has been requested to urinate and expel all that he can spontaneously, will usually make the diagnosis clear, especially if added to the evidence furnished by the searcher. The simple passage of a catheter into a supposedly empty bladder may often suffice to establish the diagnosis, but cannot be relied upon in a doubtful case; for enlarged prostate is not the only cause of residual urine. Digital examination of the prostate by the rectum should supplement the examination, and may reveal a large, full-lobed, or swollen and sensitive prostate gland, but the diagnosis of retention due to hypertrophy of the latter should not be based upon this method alone. Here it should be remarked, that at this period a new series of symptoms is liable to be manifested from the possible advent of urethral fever, or cystitis, or both.

It should be remembered that it is not the presence of residual urine alone that is dangerous, al-

though when large in quantity such may cause a serious condition of vesical atony, with perhaps a secondary dilatation of the ureters and congestion of the kidneys from back pressure. The presence of residual urine always renders the bladder liable to infections. Normal urine does not necessarily cause inflammation of the bladder, but residual urine, and the consequent congestion due to the efforts of the bladder to expel its contents, prepares the way for the development of infection of the bladder. From the foregoing it follows that the first introduction of a catheter into the bladder of a patient presenting these symptoms should be regarded as a surgical operation, and must be conducted with the most scrupulous attention to surgical details. The meatus and penis should be carefully scrubbed with soap and water. Clean towels if obtainable, if not, sterilized gauze, should be so placed as to surround the penis. The hands of the operator should be carefully prepared with soap and water, and finally scrubbed in pure alcohol. Then the penis and the urethra should be irrigated with an antiseptic solution, and for convenience and ready adaptability, a solution of salicylic acid (gr. viii to Oi) may be used. Then the catheter, which has been previously sterilized with formaldehyd gas or formalin solution, should be removed from its wrappings of gauze, smeared quickly with a sterile lubricant, and, maintaining a current through it of the antiseptic solution, should be carefully and gently introduced. The lubricant which I prefer is made for me by Van Horn & Ellison of New York, and is composed of Irish moss, with the addition of eucalyptol (1-1000) and formalin (2-2000). The first introduction of the catheter into a bladder in which there is presumably residual urine is so important and may mean so much to the patient that, in my opinion, he (or some member of his family) should be previously informed that although every precaution will be taken, there is a possibility of infection of the bladder and consequent cystitis.

In regard to catheters, one should be chosen which will be easily admitted by the meatus. It should be a soft rubber instrument with a solid tip, and its introduction should be made with the utmost slowness and gentleness. The urethra is the habitat of micro-organisms, many, but not all, non-pathogenic, and the urethra and bladder will be made more vulnerable and liable to infection in proportion to the damage to the epithelium which is caused by the introduction of the instrument in question. Moreover, if there be any reason to suspect that the individual has any catarrhal condition of the colon or rectum, or if he has been liable to chronic constipation, the first use of the catheter should be postponed,

if possible, even for diagnostic purposes, until the bowels have been thoroughly emptied by free catharsis or by a high enema, and perhaps irrigated with a weak solution of chlorinated soda. This is for the purpose of preventing infection of the bladder by the development of the bacillus coli communis.

The foregoing diagnostic suggestions are made with a case in mind in which there is yet spontaneous urination. If, however, the case presented is one in which complete retention has suddenly occurred, the patient, not being able to pass any urine except perhaps in drops, and whose agonizing attempts to evacuate the contents of his bladder are producing an aggravation of all his symptoms, no delay, excepting the reasonable time which should be allotted to the preparation of instruments, can be permitted. Relief must be speedily attained or the condition may become serious. Absolute cleanliness is, of course, essential. Though one form of catheter may not suffice, the first one to be tried is the soft and flexible instrument such as previously described. Its passage may be facilitated by the previous introduction of 20 to 30 minims of a four- to eight-per-cent. solution of eucaïn after the urethra has been irrigated. Eucaïn is somewhat slower in its action than cocain, and six or eight minutes should be allowed for its absorption before local anesthesia will be obtained.

If the soft catheter fails—on gentle manipulation—to enter the sensitive and swollen prostatic urethra, then resort may be had to one, either with an angle at the end (*coudé*), or one with two angles (*bi-coudé*), or to one with a curve and also a tapering, bulb-pointed end, known as the "natural-curve catheter," and which has been of the greatest use to me. Even these may fail, and then resort may be had to other forms, or to a carefully sterilized silver instrument with a large long curve—known as the prostatic curve. But if these successive steps cause traumatism of the urethra, as evidenced by a few drops of blood oozing from the meatus, and it is manifest that the manipulations are to be prolonged, I advise, in view of the safety of the patient, that all instrumental attempts by the way of the urethra should be discontinued, and the over-loaded bladder relieved by suprapubic aspiration. Of course, it is needless to say that this procedure should be undertaken with the same careful sterilization of the hands and of the area of puncture, and equal care in the preparation of the aspirating-needle, as in any other surgical operation. Aspiration may be repeated as often as once in four or six hours when carefully conducted, without damage, and with great relief to the patient. A high enema should be given, and in the intervals between the aspirations

hot antiseptic irrigations of the urethra should be instituted, together with hot irrigations of the prostate through the rectum by means of Kemp's tube. These will aid materially in reducing the congestion of the prostate, which added to the chronic state of hypertrophy, has resulted in the sudden attack of retention. In this way a certain amount of spontaneous urination may be restored, but in many cases this will be deferred indefinitely. At this time the conditions are so acute that no attempt should be made to massage the prostate, but subsequently digital massage of the prostate through the rectum will help to relieve the over-loaded blood-vessels of the gland and facilitate the introduction to the "catheter life," which in all probability must now begin.

The question of prolonged drainage of the bladder is, in my opinion, to be considered at this stage only in case the bladder becomes infected, and when the latter cannot be made clean or obtain rest by means of irrigation. This operation can only be considered in relation to a given case, and must be determined upon by the judgment of a competent surgeon.

In order to consider the details of "catheter life" a broad or general grouping of the cases may be made into those in which there is more or less spontaneous urination, and those in which the individual is absolutely dependent upon the catheter. As the latter class is the more important, let us follow the case of a patient to whom we have been called in the emergency of complete retention. Generally, within two or three days, and aided by the measures which have been instituted, the congestion will have subsided sufficiently to enable the introduction of a catheter. Unless great care is exercised in the first few introductions of the instrument minute traumatism of the prostatic urethra may occur, and the patient suffer so keenly that he dreads the time when the instrument must be passed. This suffering may be modified, of course, by the use each time of the eucain solution, but in the intervals between catheterization something must be done to relieve the sensitiveness. There are several suggestions which may be followed, such, for example, as the continuation of the hot irrigations which were being used during the acute stage, and this same hot antiseptic solution should be allowed to flow through the urethra each time the catheter is used. Massage of the prostate may be instituted with great comfort to the patient, but must not be performed violently or continued too long at each time. Subsequently a weak solution of nitrate of silver, not over 1-5000, to begin with, and gradually increased in strength, may be applied to the whole of the deep urethra, and especially at the bulbomembranous junction, by means of an instrument which will gently distend the

urethra at the same time the application is made; or, else by injecting the solution through a catheter of a size which has been found to enter with the least pain; also, the careful and gentle introduction of a sterilized steel sound, smeared with iodoform emulsion, will be found to relieve this extreme sensitiveness. If, in spite of care, gentleness, and patient effort, the hyperesthesia remains, and especially in those cases in which not even a measure of spontaneous urination is restored, or in which infection of the bladder has occurred, and a persistent and painful cystitis persists, some operative procedure must be considered. The first of these, in my opinion, is drainage of the bladder, and though this part of the subject will be presented by my colleague, Dr. Willy Meyer, I may be permitted to say at this time, that whether my opinion in regard to "drainage" being the first operation to consider will be changed by the re-awakened galvanocautery treatment remains to be seen. I shall make some observations in regard to the latter, and trust that my experience combined with that of others, will enable us to ascertain its merits.

To proceed with the consideration of those cases in which "catheter life" is to be led, we will now assume that the irritability of the urethra has subsided and that the catheter can be painlessly introduced. The patient may now be taught to introduce the instrument himself, and also the care of the catheter, etc.; but, first and foremost, the principles upon which depend the maintenance of a sterile bladder and urethra must be forcibly impressed upon him. If at all intelligent, he can understand (since the knowledge in regard to micro-organisms has become so widespread) that he may easily poison *himself*, and that if he does there will follow a long train of complications, the result of an infected bladder. In general it may be said that if the urine remains sterile the catheter may be passed at the patient's convenience, but this should be done once in six hours at least, leaving a longer interval at night, but depending somewhat on how long the individual sleeps.

Many a prostatic patient with sterile urine, and yet dependent upon the catheter for emptying his bladder, will sleep eight or even ten hours without being awakened by a desire to urinate. So long as the urine remains clear and sterile no necessity for washing the bladder exists. Even after the patient has become established in the habit of using the catheter and has acquired the skill and facility which many of these patients do, he should visit his physician at regular stated intervals, in order that the first evidence, even though slight, of infection may be ascertained and, if possible, immediately remedied.

Unfortunately, many of these individuals become so self-confident and so satisfied with their condition that infection occurs insidiously, increases gradually, and suddenly there is an explosion of cystitis, which may or may not be accompanied by an intercurrent prostatitis. I am in the habit of humorously informing such patients that they should periodically submit themselves to the inspection of their medical advisers on the same principle as that with which they cheerfully pay the fire-insurance premiums upon their property.

In case cystitis has supervened, what shall be done? During the acute stage the patient should be put to bed, placed upon a milk or light diet, and an antiseptic administered by the mouth which will be eliminated with the urine. I am now well pleased with the use of benzosol for the purpose. It may be given in 2- or 3-grain doses as often as every two hours, but I have given it in 5-grain doses without resulting harm. It is usually well-borne, does not set free carboic acid like salol, and in the intestines (chiefly) is transformed into guaiacol and benzoic acid. The use of Kemp's tube is also indicated in this stage. Now resort may be had to irrigation of the bladder, and if the patient is seen early enough the effect of the infection may be aborted by careful washing of the bladder with a stronger solution of nitrate of silver than I have mentioned.

It is surprising sometimes to see how a threatened severe attack may be modified by the introduction into the bladder of a solution of nitrate of silver of even a strength of 1-1000. Here let me say that this must be gently accomplished. The bladder-walls are congested and are contracting more frequently and vigorously than normal, sometimes with a marked degree of tenesmus, and if a large quantity of fluid is injected or allowed to run in with force, the affection will be aggravated. It is best to be content to inject only an ounce or two ounces of the solution, allow it to run out, and then repeat the injection. The first effect is an irritation. The patients experience what some of them jocosely call a "red-pepper" feeling, but they receive so much relief that they often ask for a repetition of the "red pepper." If this does not give the expected relief, then frequent ablution of the bladder—that is to say, three, four, or even more times a day if the urethra will bear the introduction of the catheter, with a mild antiseptic solution, must be resorted to. The first effect of the solution upon the mucous membrane must be studied, and sometimes it may be necessary to employ such a mild irrigating fluid as normal salt solution, which may be made extemporaneously by dissolving one dram of chemically pure chlorid of sodium in a pint of hot, sterile water. As

the case becomes more chronic and the bladder less sensitive, irrigations may be less frequently employed and the fluids used may be varied according to the amount of pus and mucus present. Once in three or four days the physician may use the solutions of nitrate of silver as suggested.

In the consideration of those cases in which a certain degree of spontaneous urination remains, the first question which presents is, what rule shall govern the employment of the catheter? This depends largely upon the amount of residual urine, that is to say, the average amount of urine which remains in the bladder after each active urination, and upon the sensibility of the latter organ. In many cases there is no accumulation of urine beyond this average amount which remains at or about two ounces, excepting during some intercurrent affection of the prostate which may cause an increase in the degree of obstruction. If the residual urine is normal in quality, that is to say, is not infected, is normally acid, contains no crystalline elements—in other words, if of a bland, non-irritating character, the bladder does not resent its presence, remains quiescent, and the patient is not conscious of any irritability of the viscus. In such subjects, and under such conditions, it is not necessary to use the catheter at all, but if the urine changes in quality, and especially if there are obscure pains over the sacrum or in the pelvis, then it may become necessary to withdraw even this small amount of urine—particularly at night, in order that refreshing and undisturbed sleep may be obtained. In some individuals, even one ounce or less of residual urine, if the latter, though sterile, be abnormal in other respects, will irritate the bladder, and therefore should be withdrawn.

As has already been remarked, in these cases of sterile urine it is not necessary to resort to washing the bladder; but after the bladder has become infected the question arises how often shall it be irrigated. Only general directions can be given in answer to this question. The repetition of washing will depend largely upon the amount of pus and mucus present in the urine, upon the frequency with which the patient is called upon to urinate, and also upon the general irritability of the nervous system of the individual. Some persons require daily ablution; others, once in two or three days, and others again, not oftener than one irrigation a week. The interval should be that which suffices to keep the patient comfortable—thus, many men continue for years to urinate but once in four or five hours, and are not disturbed at all during the night. After the patient has learned to introduce the catheter the most important instructions which can be given

him are as to the care of this instrument. The form and kind of catheter having been adapted to the individual, directions which will keep it aseptic must be strenuously enforced by the physician, and rigidly followed by the patient. In my experience, these directions in order to be adhered to by the patient under all conditions, must be simple. Even in the case of medical men who are the subjects of prostatic hypertrophy, and who from their calling are supposed to know the value of thorough asepsis, I have found it necessary to make the directions as simple as possible, in order that they might be followed. Heretofore, thorough washing of the catheter with soap and water after each use, and then immediately before its use, steeping the instrument in boiling water and then in the solution which is used for washing the bladder, has proved satisfactory in some respects, but of course not entirely so. Here I may say that the general intelligence of the patient and the resistance of his tissues have much to do with the prevention of infection.

Unquestionably, a simple but efficient and non-destructible method of rendering and maintaining catheters thoroughly aseptic has long been required, as well as a means which can be readily employed by our patients. It seems to me that the question of catheter antiseptics has been solved by the application of formaldehyd. To this purpose many experiments have been made with this gas, but its employment is not, as yet, within the reach of everybody. I employ in my office a Lilly's apparatus which generates the gas directly from wood alcohol, and catheters and other instruments may be exposed to its influence for hours. Lately my attention has been called to a fallacy in the use of the gas, and I may be allowed to quote from a recent paper by Dr. Park of the Health Board of New York City, who made some observations upon the diffusibility of the gas in long-closed tubes, such as we may consider a catheter to be. For example, he filled a glass tube with colonies of bacteria and noted that those at the extreme end of the tube were not touched by the gas. He drew the inference that although the gas entered each end of the catheter there might be a zone in its center untouched by it. Hence, it appears that a current is necessary for the transmission of the gas through the catheter or to the end opposite to that at which the generation of the gas occurs. Therefore, since the polymer of the gas, known as paraform, which is in the form of powder or tablets, and which volatilizes, has been used for the purpose of maintaining catheters sterile while suspended in glass tubes or in boxes, this source of failure should be remembered.

In order to ascertain whether the solution of for-

maldehyd called formalin (a forty-per-cent. solution of the gas) would answer the purpose, and to ascertain the strength of the solution necessary to render catheters sterile, I took three catheters which had been used by patients; one which had been used for the purpose of withdrawing sterile urine, and only used three or four times; another which had been used by a patient for some months, but whose bladder was infected; and a third which had been in use nearly two years in a moderately infected bladder. These catheters had all been treated in the same way by the persons who used them; that is to say, they had been carefully washed in soap and water immediately after use, then steeped in boiling water, and also steeped in boiling water immediately before being passed into the urethra. In the first instrument referred to staphylococci were found—a non-pathogenic and a large pathogenic bacillus; in the second, a large coccus and a diplococcus, the latter differing morphologically from the gonococcus of Neisser; in the third, staphylococci and streptococci, and a large spore-bearing non-pathogenic bacillus were found. A one-per-cent. solution of formalin was used. This killed all pathogenic germs after fifteen-minutes' immersion, but it should be observed that in sterilizing catheters in the liquid formalin care should be taken to see that the air confined inside is displaced (by the liquid) by a process of stripping or milking. This I regard as highly important, and desire to call especial attention to it.

From the foregoing may be deduced the following general directions, which must be rigidly followed by the patient:

The soft catheter with solid tip is the best to use if possible. If a rigid one is required, one made of elastic webbing, with a curve or bend at the point which will be the most comfortable for the patient, is preferable. A new catheter must be treated with the same care as to cleanliness and asepsis as one which has been in use. If possible it should be exposed to the vapor of formaldehyd; if not, it should be immersed in a solution of formalin (one- to two-per-cent.) during at least fifteen minutes. Then it should be rolled in a strip of bichlorid gauze or placed between the folds of a perfectly clean towel. Each catheter should be kept in a separate receptacle or closed drawer where dust cannot find access to it, and where it cannot be handled except by the person who is to use it. If the patient's necessities require that the instrument must be carried about with him, it should be kept wrapped in several layers of bichlorid gauze, and outside of this should be placed a wrapping of "waxed" (parafin) or parchment paper held firmly by rubber elastic bands. At the time of use the patient must thoroughly clean his

hands and rinse his fingers in pure alcohol, of which he should always have a quantity on hand. In the meantime the catheter should be lying in the formalin solution. Then, after shaking it and wiping off any drops which may remain upon it with a piece of clean gauze (to avoid irritation of the urethra with the solution), and smearing it with the lubricant already referred to, it may be gently introduced. Immediately after use the catheter should be thoroughly washed with soap and water, steeped in the solution of formalin and then carefully put away in gauze or clean towels in readiness for the next use. If the individual is dependent upon his catheter, and in consequence must have one at his place of business, it is well to provide one sterile instrument for home and another for office use—to be cleaned as well as possible immediately after using and then put away for thorough sterilization on return to the base of supplies.

I have a patient who has a rule never to use one catheter more than a week. He buys them by the dozen, is very particular in their care, and at the week's end throws the catheter away and starts in with a new one. He maintains his bladder in an admirable condition, and I may say that I rarely see him, though he comes in for an occasional inspection, and feels well repaid for the care which he exercises.

SOME OF THE DANGERS SURROUNDING THE DAIRY.¹

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If the dairy is suggested to the every-day urban citizen, his imagination immediately conjures up the fair and buxom milkmaid, the foaming pail, the breath of the sweet-smelling kine, luscious cream for his oatmeal and strawberries, golden pats of butter, and bountiful, innocent sweetness, milk and honey. It may be owing to this sentimental idea of the dairy that so many take kindly to raw milk, while having at the same time an abhorrence at even the thought of eating raw meat from the same animal; when, actually, the danger of contagion, disease, and the ingestion of impurities are far greater from the milk than the meat. Few people, I believe, realize the menace which lies in the milk-supply of cities. Milk which is dangerous, and perhaps deadly poisonous, appears just as innocent, innocuous, and deliciously nourishing as the fluid that is so in truth.

In many of the dairies supplying milk for food nearly everything is either totally wrong or not quite right enough to produce a wholesome product. It

is well known that the dairy cow is subject to numerous grave diseases, and many of her maladies are, we know, the same as those which afflict the human race, and it is also an established fact that any disease in the cow affects her milk perniciously. Every one who observes current literature on the subject knows that there are several articles of absolutely refuse material which are used as food for the dairy cow, while she is expected to give in return one of the highest types of food for human use. The cow is necessarily a delicate creature. What condition may be imagined, except actual disease, that is more opposed to robustness, vigor, and hardihood to withstand the shock of cruelty, bad food, and dirty surroundings than maternity and lactation? The cow, while giving us milk almost constantly, at the same time sustains a fetus; and so it is only reasonable to affirm that the dairy cow must receive solicitous attention, gentle treatment, and absolute cleanliness in her surroundings and feeding if it is expected that she will supply milk fit for human food. It was long ago discovered that what affects the mother affects the nursing, sometimes even so far as to cause the death of the latter.

Unfortunately, it is the exception to find a dairy in which the cows are treated kindly and fed or housed in a cleanly manner. At the present time health authorities appear to recognize nothing but tuberculosis as the sum total of all the disease and danger contained in the improperly managed dairy. The sources of possible contamination which surround the milk after it is drawn from the cow are many and serious on the majority of dairy-farms as they are conducted at the present time, and it is this part of the hygiene of the dairy to which I particularly wish to call attention now, because this branch of the subject receives everywhere less attention than it deserves, and I believe that when we are able to exclude the diseases which arise from milk-contamination in the dairy, outside the cow, we will be better able to trace some of the epidemics which find origin in the animal herself. Until all the dangers of the dairy are recognized many of the more grave and menacing ills cannot be remedied.

It must be remembered, in considering milk, that there is no other article of food just like it. There is no food, fluid or solid, which presents so many favorable conditions for the absorption of the tangible material of disease and for its preservation and multiplication, and in no other instance is a medium found for the conveyance of infection by which so much harm can be accomplished in such a very short time. Of course, a certain degree of heat will disinfect milk, but even a high temperature will not eliminate the toxins already contained therein.

¹ Read at the Ninety-second Annual Meeting of the Medical Society of the State of New York, held at Albany, N. Y., January 25, 26, and 27, 1898.

We are constantly searching for a specific remedy for scarlet fever and other often fatal diseases of childhood, while frequently permitting the bacterial cause of these diseases to be fed to our children in their milk. Many of the diseases of infancy may be rendered much less frequent or even altogether eradicated by proper attention to the hygiene of the dairy, and I believe that the achievement of success in this line is being delayed by the futile efforts of well-meaning physicians, who imagine that they are correcting the evils of a bad milk-supply by modifying, Pasteurizing, sterilizing, adding animal and chemical compounds, and by otherwise changing the character of the milk.

Around every dairy is a multitude of dangers—dangers, unfortunately, which are not always appreciated or avoided, and hence culminate in disaster. There are many other animals about the dairy besides the cow which menace the dairy product, often as seriously as a diseased cow herself. Horses, dogs, cats, rats, mice, and fowls undoubtedly are often the direct means of infecting milk, and of thus passing contagion along to the human race.

Cats loll and purr around many dairies all day, and it is a very common thing to see a wheezy old cat lapping warm milk from a pail or other milk container. These animals are known to succumb to a throat trouble which appears identical with human diphtheria, and it is also known that they die from many tuberculous forms of disease. So it is not unreasonable to ascribe contagion to these animals when they are allowed the freedom of the dairy. Dogs prowl about the farm day and night, and very often depend upon the carcasses of dead animals for their living. Cows, horses, and pigs often die of septic and contagious diseases; the carcasses are hauled into the woods or fields, away from the house, and there left exposed as meat for the farmer's dogs. These dogs come back and lap the milk from the pail, lick the empty milk vessels which are never properly cleaned; and can there be doubt that the milk is thus infected? Where this danger exists in a dairy it is practically unlimited. Rats and mice infest the ordinary dairy; they get into the milk and the milk-vessels. These animals also have their diseases, and, therefore, the element of danger and disease from these pests must be acknowledged. The poultry around the farm are sometimes very numerous, and not always healthy. The diseases to which they are subject are many, and, owing to their high, normal body temperature (108° F.) there is no other animal which so readily becomes tuberculous or which dies so quickly from this disease. On some dairy farms the hens are everywhere, in the cow stable, in the milk-house, in the dwelling-house, and even in the

milk-pails. The dairyman, as a rule, has a family of children who are often attacked with the grave diseases of childhood. The milking vessels are frequently washed in the house, and not unusually there is a close connection between the house and the dairy, and sometimes the living-house is, itself, used as a dairy-house. It requires no argument to point out the dangers here; in fact, numerous epidemics have been traced to such a source.

Those who milk the cows are not always free from disease; often we see the milker with hands that are cracked or sore. One of the dirtiest habits which exist in many dairies is that of wetting a cow's teats to lubricate them, to make the milking process easier to the milker. This custom, not rare, unfortunately, is the most common nasty habit permitted in many dairies. If it were not for the good that is sure to follow the agitation of these matters I should hesitate to record that I have myself seen milkers spit upon their hands to wet the teats before they began milking, and then, when there was a certain quantity of milk in the pail, dip their dirty hands into it, and keep the teats dripping wet during the whole process of milking. Cow's teats should not be wetted in any manner, especially in winter, even to wash off dirt if it is already there. This should be removed with a brush or a dry towel. Wetting of the teats very often leads to chapping, and chapping to cracks, and these cracks often become running sores from the constant irritation of the milking process.

In these days of bottled milk the danger of spreading contagion is vastly increased. Bottles which go into rooms where children are suffering from any of the contagious diseases must be a source of danger if they are not subsequently sterilized. Quite recently I had occasion to visit a man who did a large bottled-milk business in New York City. The milk came in wagons from the upper part of Westchester County, and he had a horse-stable half way between his source of supply and New York. Here his horses were changed. All the milk came to this stable in cans, and the empty bottles came back here from New York to be washed. He had two wooden troughs in this stable, and a stove with a large kettle to heat water, and the bottles were washed here in lukewarm water with sal soda, rinsed with cold water, and then filled from the cans.

I think, if some of us followed these bottles around and had seen where some had been, we would want them pretty well steamed and sterilized before we drank milk from them. It is often a source of wonderment to me why we do not have more direct and palpable evidence of trouble arising from just this state of affairs. Of course, there are unfortunate results from this sort of carelessness; but

how much or how little we are not always able to say. We ought to be able to prevent it by insisting that all milk containers be sterilized with steam under pressure after each usage.

When the dangerous elements are recognized and eliminated from the dairy, then it only requires that the cows be healthy, properly fed and cared for, in order that we may have milk fit to drink and to feed to the baby, without the intervention of the chemist or any of the prevailing laboratory methods, which at the best are only questionable makeshifts.

A GROUP OF AGED PATIENTS.

By J. H. EMERSON, M.D.,
OF NEW YORK.

ONE morning last winter I had occasion to call upon four patients whose united ages amounted to 346 years, and in thinking over others, whom I had recently seen, I realized that there were enough who were over eighty years of age to form a rather interesting group. I have, therefore, written down such facts as constitute sketches, rather than detailed or complete histories, of a few of them, in an effort to trace such features referable to advanced age as they present in common, and to give some account of their management. I hope in this way to furnish a topic for discussion, and, it may be, reach some generalizations of clinical utility as to phases of disease, and some of the demands of treatment, in the aged.

CASE I.—Female, aged ninety years. The patient lived the ordinary life of a well-to-do woman in society, spending the winter in New York and the summer at Newport until the autumn of 1884, when she returned to town on the last day of October, exhausted, feeble, and breathless, so that she was barely able to mount the single flight of stairs to her bedroom. I found a feeble and dilated heart, albuminous and phosphatic urine, and subsequently casts. The patient was short in stature, and at this time very stout. Under the influence of rest in bed, with the administration of mercurials and digitalis, attention to the bowels and diet, and good nursing, she gradually recovered from the most urgent and distressing symptoms, and attained a great measure of comfort. During this period she lost, it is true, the greater part of her flesh, and also her muscular strength, so that although in the following summer she went out of town to a place but a few miles off, it was necessary to bring her back the whole distance in a carriage, and since then she has remained on one floor of her house, occupying a north room during the hot weather, and a south room the rest of the year, but for many years now never leaving her bed except when lifted out to have it made.

The physical ailments which I had to encounter in this case were, in addition to the feeble heart and degenerated kidneys, an umbilical hernia, which

would occasionally escape in spite of a bandage constantly worn, a lateral as well as angular curvature of the spine in the dorsal region, an obstinate constipation of the bowels, and of late years a pyelitis, with probably the development of a sac in relation either with the pelvis of the kidney or with the ureter. Thus, the urine will sometimes remain clear and free for months; then will come a period of pain, nausea, vomiting, and perhaps some febrile movement with very scanty elimination, and sometimes the presence of a large mass in the left side of the abdomen.

Relief comes only with free urination, sometimes about one-third part of the excretion for days together consisting of tenacious, phosphatic, purulent matter. These complications, especially those arising from bowels and kidneys, very often lead to acute disturbances of the stomach, with sometimes an irritating salivation, but more frequently nausea, constant gaseous eructations, vomiting, and syncope, so that when these attacks are threatening the nurse keeps mustard and ammonia ready for instant use, hot water at hand, and the hypodermic syringe ready charged with brandy or tincture of digitalis. The prompt use of these measures has again and again rescued the patient from profound syncope before the nearest physician could reach her. Then she enjoys long periods of placid comfort, lying from morning till night propped up on her left elbow with many a little cushion, holding her paper or book, reading everything that is new and entertaining, and keeping up the most lively interest in all the affairs of the city and the great world. The left pectoralis major muscle, meantime, has acquired a surprising strength and firmness in her otherwise emaciated frame.

Of course the treatment has long contemplated nothing but such regulation of the bowels as will keep the stomach available for sufficient supplies of food and the meeting of emergencies as they arise; for the heart is quite equal to the minimum demands which are made upon it by one who rests absolutely in bed all the time, whose passions are all in abeyance, and whose stomach is never overloaded with food. The question of feeding has often been quite puzzling, but the solution of it has always been aided by finding how very small the actual demands of her system are. The proportion of alcohol has been gradually increased. Many changes have been made from time to time, but for months past the following has been the almost unvaried dietary: During twenty-four hours she takes two cups of black tea, being about half milk, one piece of zwieback, one lady finger, one soft-boiled egg, two cups of bouillon, and sometimes the soft part of a baked apple. She also disposes of one gallon of brandy in six weeks and one bottle of sherry a week, making about three ounces of the former, and three and one-half ounces of the latter *per diem*.

CASE II.—Female, who died about January 1, 1897, in her ninety-first year, and whose case I have already mentioned before this society. Her death was directly due to the development of malignant disease

of the stomach, and, probably, of the large intestine, which had followed upon the cancerous degeneration of what Dr. Abbe referred to as an explosion cyst, originally a cystic tumor, over the left scapula, and which had remained an unhealed ulcer during four or five years. When she came under my charge, about three and a half years ago, I learned that she had been using during many years suppositories of opium and extract of belladonna, the dose not having been increased, however, since it was originally prescribed, nor did she increase it till about two years ago, when she doubled it, and after that took daily a dose of $2\frac{1}{4}$ grains of opium, and $\frac{1}{4}$ grain of extract of belladonna. She had also, many years ago, been treated with nitrate of silver to an extent which had left a permanent stain upon her lips and cheeks. Her arteries were rigid, she had both mitral and aortic heart murmurs, and the urine showed a slight but constant quantity of albumin.

Having always been in the habit of indulging her taste for rich food she suffered much from indigestion and lack of appetite, troubles which were naturally increased by the constipation due to her opium habit. She would often pass a number of days without an evacuation of the bowels, and then relieve herself by a process of excavation aided by enemata. These methods had resulted in an atonic state of the large intestine, so that no ordinary dose of cathartics produced anything but discomfort. Finally, I succeeded in producing evacuation of the bowels by means of capsules of blue mass, extract of colocynth, and ipsecac., to which, at Dr. A. A. Smith's suggestion, I added extract of cascara.

About the end of last October, however, epigastric pain and tenderness, with occasional vomiting, which shortly showed a coffee-ground character, and the detection of a small mass in the epigastrium to the right of the median line warranted the diagnosis of malignant disease of the stomach. From this time treatment had to be limited to the administration of such concentrated food as she could be persuaded to swallow, including liberal quantities of brandy. She was also given cathartics and narcotics. The adjustment of the latter proved to be a most difficult problem, both on account of her long addiction to opium and of the profound depression produced by doses sufficient to cause sleep. She could not sleep without opiates, and the pain also demanded their use, yet she absolutely refused to go to bed. She would at the utmost spend but a few hours lying on the sofa, but most of the entire day and night sitting up in her chair and resisting in every way she could all efforts to make her sleep, to the despair of her nurses. I had actually twice to hold and etherize her, which secured several hours' sleep.

If a sufficient dose of morphin was given to procure a few hours' sleep, the succeeding period was marked by hopeless depression of spirits, with constant restlessness and fear of impending death. Coffee, lavender, bromids, codein, Squibb's liquor opii compositus, and chlorodyn, proved useless either to stimulate her, or to prolong in moderate degree the narcotic effect of the morphin. So that ultimately,

for some weeks, she received at about 9 P.M. one of the suppositories, followed, about midnight, by a hypodermic injection of $\frac{1}{4}$ -grain of morphin, and about 3 or 4 A.M. either a second suppository or $\frac{1}{8}$ -grain more morphin, with, for a while, trional instead of a second dose of morphin. Such medication had to be suspended now and then to allow of the administration of cathartics, although toward the end there was a diarrhea, which was regarded as evidence that some portion of the intestinal canal below the stomach had become involved in the disease.

CASE III.—Male, aged eighty-two years, has a feeble heart, slightly enlarged, but no valvular lesions. His urine contains a small amount of albumin, but casts have not been found. The earliest symptoms of failing health began to be noticeable some nine years ago, and were, a gradually increasing slowness of gait, leading to shortness of breath and a tendency to puff, or a prolonged expiration, accompanied by a whistling noise. He frequently had to stop and lean against a railing until he gained breath or force enough to go on. A very slight acclivity materially increased the trouble, and one reason why he can walk more comfortably at his home in the country is because the town in which it is situated is almost absolutely level. By degrees, however, this dyspnea became noticeable even when he was sitting in his own library, more particularly if he tried to talk, or if his visitors were many, or if they bored him. Close attention was paid to his diet, for he had been accustomed to hearty and rather rich food. Regular action of the bowels was readily secured, and from time to time I gave small doses of calomel.

The lungs have presented symptoms of emphysema, but of the senile or so-called atrophic type, without asthma, or more than occasional and moderate bronchial catarrh, though there are often fine râles on inspiration in the lower lobes of the lungs posteriorly. He has never suffered from orthopnea, always finding comfort in the recumbent posture. The most serious intercurrent attack he has had occurred two years ago, when he suffered for some weeks with atony of the large intestine, accompanied by some pain and irregular action of the bowels, and leading to great debility. As a result of this he gave up his house where his library and dining-room were two stories away from his bedroom, and took a large apartment fronting on Central Park, where he has an abundance of air and light, and all rooms on one floor. Here, under the care of a competent woman attendant, he lives with all the comforts his physical disabilities will allow.

So far I have said little of his medical treatment. I have found it impracticable to give him iodids, and although Dr. Loomis, who saw him in consultation, urged them, a further trial proved them to be so disagreeable to him that I gave them up.

Various other preparations, burning of niter paper, etc., have but moderate effect in relieving the dyspnea, and the best results have been obtained from a pretty steady administration of small doses of digitalis, strophanthus, and belladonna, in varying pro-

portions. One of the most interesting features of this case has been the gradual change in disposition. From having been as a practising lawyer a man of positive convictions, ready to say a sharp thing even at the expense of another's feelings, showing often his rough side to those about him, and liking to do his own work in his own way he has gradually grown more genial and gracious in speech and manner, craves sympathy, is absolutely submissive to medical authority or the suggestions of his nurse, and seems to find nothing more distasteful than making up his mind to do a new thing or to exert himself physically or mentally. Often he will smile, but shake his head at the proposition that he should go even into the next room. Meanwhile he gives freely to charity, and takes pleasure in seeing his friends who call upon him.

CASE IV.—Female, aged eighty-nine years, presents another instance of varied pathological conditions and much suffering, which still have not prevented the attainment of great age. She has suffered over twenty years from convulsive tic, for five years from chronic inflammation of the subcutaneous connective tissue of the legs below the knee, with occasional eczema and obstinate ulcers, making her a prisoner in her room, and three years ago she had an attack of pneumonia which was interesting in three particulars, *viz.*: she recovered from it; the confinement to bed cured the ulcers on her leg, and third, she learned the use of whisky, from which she has since been unwilling to part. It may be thought, naturally enough, that this is not a record particularly creditable to the physician in charge, but I had called in, for surgical consultation, two members of the Clinical Society; had exhausted my own resources on the *ulcera cruris*, and yet they healed only during the confinement to bed made necessary by the pneumonia, to reappear when she was again able to be upon her feet.

In spite of the demonstration afforded by this experience, no persuasion or exercise of professional authority have sufficed to make her consent to another period of repose in bed. The case furnishes an unhappy instance of a narrow and undisciplined mind, a prey to many an old-time superstition and prejudice, of personal vanity which has grown ridiculous and pitiful with advancing years, and of the evil resulting from the want of personal cleanliness, when the dim eye of age will not recognize its deficiencies, and the attentions of hired attendants and of affectionate relatives are alike wanting or rejected.

As further illustrations of conditions which call for our attention among octogenarians, let me mention very briefly the following cases:

CASE V.—Female, aged eighty-three years, now drawing to the end of a life of many trials, which culminated for her personally five years ago in an apoplexy and right hemiplegia. The conditions which persisted were an emotional state with frequent tears, and that form of aphasia in which simple phrases come easily but in which the special word to tell the incident which made an impression upon the mind

will not come, on which follow disappointment and hopeless attempts until the faint hold on the idea is entirely lost. There were also some contraction of the forearm and a dragging foot. A placid temperament, a good digestion, sound heart and kidneys, supplemented by good nursing, have prolonged the scene until now increasing drowsiness and debility point to an early fatal termination.

CASE VI.—Male, aged eighty-two years. This patient last fall presented a large ischiorectal abscess, the third development of the kind within twenty years, but it healed so promptly following simple incision and drainage that no more radical treatment seemed warranted. He has long had a bronchial catarrh, with some dilatation of the tubes, and twice has had acute exacerbations which required confinement to bed. From early life he has had an irritable bladder, which has made him somewhat of a recluse, and prevented him from doing many things that would otherwise have been attractive. But he does not seek treatment for it, having apparently made up his mind that it is a thing to be endured rather than cured. In spite of his age he still occasionally visits the Produce Exchange, of which he was until recently an active member.

CASE VII.—Female, over ninety years of age, has been under my observation but a short time. About eighteen months ago she fell and injured the right thigh, so that she now has to walk with a cane, but fortunately escaped a fracture. About six weeks ago she had what must have been an embolism of some artery of the brain, for she suddenly found herself unable to rise from her chair on account of weakness of the left leg. This was only temporary, although the left arm was of but little use for several days. These symptoms had passed off when I saw her, but I found the most rigid arteries I ever felt. The heart sounds gave evidence of both mitral and aortic disease, while the urine contained a small amount of albumin, but no other evidence of renal degeneration. Both eyes are cataractous, so that she can with difficulty recognize a person who enters the room. Her mind is still alert and intelligent, and it is surprising to see how briskly she can walk in the street, supported on her son's arm, or go about her own apartment unaided. The simplest directions as to diet and the regulation of the bowels, together with the administration of small doses of nitroglycerin, have contributed materially to her comfort.

CASE VIII.—A Quaker maiden, ninety-one years of age, two years ago came comfortably through an attack of erysipelas involving the head and most of the trunk. It began at the left nipple in an excoriated area, connecting with a small sinus from which a scanty purulent discharge constantly flowed. The excoriation healed under applications of oxid-of-zinc ointment, and the discharge ceased. Since then it has been useful to her to take about an ounce of whisky daily in divided doses. Another indulgence, from which she will not be parted, even while ill, is candy, of which she secures a supply for daily use. She dozes away much of her day but is bright and sociable at meal times. A year ago

she went to the photographers to have her likeness taken, and spent last summer at Nantucket.

CASE IX.—Female. I desire to mention this case because of the long endurance of malignant disease, the patient dying about a year ago at the age of eighty-one years, after having suffered twenty-four years from an epithelioma, which she first showed me during 1872. It began in the skin of the forehead, a little to the right of the median line, extended down to the root of the nose, to the right eyelid, and ultimately to the orbit. Dr. Prudden found it a typical epithelioma in 1883. At that time I did a plastic operation upon it. I subsequently used various caustic applications, curettings, etc. Dr. Sands operated upon her once, and Dr. Weir twice. After the last operation, which was four or five years before her death, it was surprising to see the comfort she derived and the degree to which the ulcerated surface diminished under the persistent use of a bichlorid lotion, followed by free powdering with iodoform. This patient also had a large fatty tumor in the right axilla.

In reviewing the points of interest presented by these cases, I think there are several which are noticeable and characteristic of the one feature they have in common,—I mean the advanced age of the patients. Thus, all of them are the subjects of more than one marked pathological condition. Persons who reach eighty, much more those who reach ninety years, must be endowed with more than ordinary capacity for enduring the minor ills of life, and the same vitality doubtless stands them in good stead when more serious diseases develop; so that on examining such patients it need not surprise us to find a tolerance of disease in important organs to which the more vulnerable would long before have succumbed. As akin to this, and largely accountable for it, I would place that absence or blunting of acute sensibility, which is a trait of the aged. In earlier life, the functions of all the organs are vigorously and actively performed, the impressions upon all the senses are sharply felt, and meet with a quick response in either mental or muscular activity, giving the keen zest to healthy existence. But the man who has lived through three score years and ten begins to realize that his affairs will go on pretty well even if he does not hurry and drive to accomplish them. So many little stimuli have affected him that a degree of tolerance has been established. There comes a time when even Ulysses or Gladstone no longer cares,

"To drink delight of battle with his peers."

He is satisfied with a placid and uneventful course of life, and finds his recompense in diminished anxiety, less wear and tear, fewer demands on failing powers. He gets a glimpse of the twilight of the gods. If the restlessness of earlier years is main-

tained, if the old man insists on keeping up the activities and sharing the responsibilities and even the pleasures of middle life, it soon appears that he is not availing himself of the prerogatives to which his years entitle him, and fretfulness and impatience add largely to the physician's difficulties in treating the patient. The gentle amelioration of the temperament and the restful calm that comes from it, are well illustrated in Cases I. and III., and the opposite in Cases II. and IV.

When finally we come to consider what lessons of treatment may be learned from the observation of these aged patients I would first emphasize the value of repose, a striking instance of which is furnished by Case I., in which an overtaxed heart, even in the presence of many and serious complications, has been able to perform its functions with comfort for many years. Next, and as a most important agent in securing the restful life, comes a good nurse, able to take up and bear the many personal cares our patient has long been feeling as a burden. And among the first duties of the nurse, the faithful performance of which may be more manifest, perhaps, to friends and physician than to the patient, will be keeping him or her clean. I have known wondrous changes, appreciable by more than one sense, wrought by such simple care given to those whose own senses were dulled by advanced age. Then, too, the physician must be willing to hold his hand. It is seldom that what is called active treatment is required. He must be satisfied to let many matters take their course, must be content to alleviate rather than cure, to advise against a resort to surgical measures which might be clearly indicated in similar conditions in younger persons.

The nutritive demands of these patients are apt to be small, and it must be recognized that alcoholics in some shape are almost always needed. The small amount of food, the fact that much of it is taken in a concentrated form, the want of active exercise, all contribute to sluggish action of the bowels, and the simpler laxatives are matters of almost daily necessity.

An Extraordinary Case of Extra-Genital Chancre.—At a meeting of the Ophthalmologic Section of the College of Physicians of Philadelphia, held January 18, 1898, Dr. G. E. de Schweinitz described and exhibited a water-color sketch of a case of chancre of the conjunctiva in a physician who became infected during the delivery of a pregnant woman. The physician's face was spattered by some of the discharge, and was hastily wiped off with her apron by an officious bystander. The diagnosis was not made till the lymphatic glands of the face and neck became swollen and the specific eruption appeared on chest and limbs. Under antisymphilitic treatment the ulcer which had appeared on the conjunctiva rapidly healed and all symptoms disappeared.

CLINICAL MEMORANDUM.

A PERSONAL EXPERIENCE IN RENAL SURGERY.

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(Concluded from page 177.)

CYSTS.

WHILE renal cysts, sometimes containing large amounts of fluid and generally single, are found, and presumably are acquired, yet it is believed that the multiple cysts or the veritable general cystic degenerations of the kidney are of congenital origin or begin in early life, and that both kidneys are usually simultaneously involved, though not always to the same extent. Occasionally this transformation with its innumerable cysts is encountered in but a single kidney, but this is so rare that surgical action should not be based on this fact alone. The ordinary cysts—that is to say, those which are few in number and comparatively small, and in which decided renal tissue may be seen to intervene between them—do not call for surgical interference, though they occasionally attain such size as to necessitate operative relief. The hemorrhagic tendencies, with the increased tension which often supervenes and produces renal pain, are usually not to be diagnosed until a surgical puncture or an incision has been made—sometimes not until after a nephrectomy has been performed, as in Case III.

Concerning the true multiple cystic degeneration, an example is given in Case XXXV., in which a surgical error was made. From a too imperfect examination of the other kidney, its rounded inferior end having only been palpated, the deduction of one sound kidney was made and the nephrectomy accomplished. It proved afterward that the remaining kidney, though effective in a previous easy condition of life for carrying on the necessary urinary secretion, yet, with the additional load of elimination, it failed almost entirely, and the patient, though recovering from the operation, died uremic not long thereafter.

While in this instance no difficulty in diagnosis arose as soon as the kidney was exposed, yet I have since seen in consultation with a colleague an example in which, after the kidney had been exposed by a lumbar incision, great difficulty was experienced in determining whether the irregular knobbed masses yielding bloody fluid on puncture were due to multiple cysts or to a neoplasm. Under the impression that the latter existed, nephrectomy was resorted to with a fatal result. The accepted rule of surgery in these cases is that extirpation is not justifiable.

CASE XXXV. Multilocular Cyst of the Kidney—Nephrectomy—Recovery.—Caroline B., aged thirty-four years, entered New York Hospital January 7, 1890, with a history of constant and increasing pain during the four previous months, associated with the discovery of a round, smooth swelling in the left loin. Examination showed the left side of the abdomen to be occupied by a solid

nodular mass of variable consistency, which reached nearly to the pelvis, and was quite immovable. On consultation, it was supposed to be an enlarged spleen or a retroperitoneal growth. The urine was pale, acid, of a specific gravity of 1010, and contained a trace of albumin. There were no casts, but an abundance of renal cells.

January 10, 1890, a vertical incision was made at the outer edge of the rectus muscle. Upon opening the abdomen the tumor projected itself through the wound and was recognized as a multicystic kidney. It was so badly diseased that it was removed, especially as palpation showed the right kidney to be comparatively free from disease. Gauze was used for drainage.

Although the patient had received only $\frac{1}{4}$ grain of morphia (by hypodermic injection before the operation), her respirations fell to 4 per minute afterward, and her condition was critical for a time. She also vomited a good deal for several days, but finally recovered, and left the hospital in five weeks after the operation, the wound being not quite healed at the time.

The extirpated kidney was made up of a mass of cysts. It weighed 1038 grams and measured 25x12x10 cm. The vessels and ureter were normal. The individual cysts varied in size from a minute speck to 5 cm. in diameter. Their contents were clear, grayish, and even opaque and black (Fig. 3). The patient, it was afterward learned,

FIG. 3.



Multiple cystoma of the kidney.

made but indifferent progress after leaving the hospital, and some three months later developed edema and died from uremic convulsions. The autopsy showed that the right kidney was moderately enlarged, but that it had also undergone marked cystic degeneration.

CASE XXXVI. Supposed Appendicitis—Cyst of the Kidney—Multiple Abscesses—Transperitoneal Nephrectomy—Death.—Alice H., aged thirty-three years, concluded a pregnancy by a normal labor two months before entrance to the hospital. No symptoms were noticed until two days before operation, when there was a pain in the right side, increasing in severity, and followed by a chill and vomiting. Slight vesical tenesmus was noticed.

There was an ill-defined mass reaching from just below the ribs, downward, beyond the anterior superior spine of the ilium, and toward the median line. It was most tender at its lower margin, and dull on percussion, and did not present a clear outline. The abdominal walls were very thick. The patient had a temperature of 102.6° F., and a pulse of 116. The urine was acid, of a specific gravity of 1020, and contained ten per cent. of albumin by volume, and a moderate amount of pus. The diagnosis was doubtful. It lay between appendicitis, with a high-lying abscess, or a ruptured gall-bladder, or renal suppuration.

December 19, 1895, a vertical incision was made over the lower part of the tumor—to meet the probability of its being an appendical abscess. The appendix was found to be normal. The tumor was then ascertained to originate in the kidney, and the abdominal incision was there-

fore enlarged upward and the peritoneum over the kidney incised, peeled back, and sewed to the divided peritoneum of the wound. Aspiration revealed a large cyst containing urine; and as the kidney was evidently further diseased, the ureter was tied with one strong silk ligature and the vessels with another, and the kidney removed. During the manipulation the ligature on the vessels slipped, and considerable blood was lost before it was replaced. A lumbar incision was made for drainage, and the posterior peritoneum stitched together over the bed of the kidney, and the abdominal wound closed. Despite stimulation, hot enemata, and an intravenous injection of saline solution (14 ounces), the patient died within twelve hours.

The extirpated kidney contained numerous small abscesses, especially in its lower two-thirds (of acute origin), and above this there was a large thin-walled interstitial cyst lined with a dense membrane. The renal tissue was the seat of parenchymatous and interstitial inflammation. No autopsy was permitted.¹

NEW GROWTHS.

The outlook for a patient with a malignant growth of the kidney is grave indeed. As far as is known Kocher was the first surgeon who was able to save such a patient by removal of the diseased organ. That was over twenty years ago. Since then some hundreds of attempts have been made in the same direction, but usually without encouraging results. Up to 1890 a large proportion of the patients operated upon (fifty-two to sixty-six per cent., according to different authors) died from the effects of the operation itself. Since then the results have been better, and according to Wagner the mortality from operation is now not more than twenty to twenty-five per cent. in the hands of the most expert surgeons. Individuals have recorded still better results; for instance, Israel had a mortality from operation of only 12.5 per cent. in twenty-four cases. In the malignant growths in children, which are principally sarcoma, Walker² reported a mortality from the operation of thirty-seven per cent. None of these results take into account the deaths from recurrence, but granting that almost all of the patients operated upon succumb either to the operation or to the disease, an operation, in adults, is still advisable, and is indicated in those cases in which the patient's condition is favorable; for thereby a period of comparative comfort of from two to four or even more years is gained, as well as the possibility of a radical cure. In children, however, out of 60 nephrectomies only 4 patients survived a period of 3 years, a result that almost prohibits operation. When one turns to the published histories of these cases to ascertain which were *absolutely unfitted for operation*, it appears that the decision must rest, aside from the patient's general condition, not on the size of the tumor, nor on its duration, but on the amount of existing adhesions. A neoplastic kidney with adhesions is hard to remove, and its dissection is often long and dangerous; so that these patients frequently die from shock and loss of blood. If the operation is successful the patient is also certain to die, either from a continuation of the growth

in the vicinity, or from metastatic deposits formed before the removal of the primary focus of the disease.

An early diagnosis is here, as in all malignant growths, most important, and in the case of the kidney it is especially difficult to make. The presence of a tumor may be the first sign observed. Thus, in a case reported by Rovsing,³ a woman, aged forty-five years, had noticed a swelling in the side, where she had had some pain during four months. The urine was absolutely normal, and the tumor movable. Under these circumstances an easy operation was expected, but the adhesions about the upper part of the kidney were so firm that it was torn in two in the attempt to remove it, and the patient died from shock and loss of blood within six hours.

If the growth originates in the lower part of the kidney, both diagnosis and operation are rendered easier.⁴ Unfortunately this is not apt to be the case, for the majority of tumors begin either in the suprarenal capsule and grow into the kidney, or else in the upper part of the kidney itself. Even when a tumor is palpable a diagnosis is by no means certain. One of the most difficult of diagnoses lies between a malignant growth and multilocular cystoma. Even when the latter is bilateral, as it usually is, it may still be palpable only on one side. Here an exploratory incision is the readiest method of deciding the question. When a cystoma or an adherent carcinoma is found, the wound should be at once closed. In some cases a quantitative estimation of the amount of urea excreted in the twenty-four hours may be significant. If cystic or neoplastic degeneration has reached any marked degree, the urea elimination will be so decreased that it will be useless to think of any radical operation.

Other cases of malignant tumors are associated with hematuria. This symptom, again, may be very deceptive; for instead of the painless, constant hemorrhage which we might expect, the blood often comes intermittently, with colic, and with the association of urates and uric-acid crystals or even small bits of gravel, so that the diagnosis of nephrolithiasis is often erroneously made. The loss of weight, the presence in the urine of abnormal varieties of cells, or bits of tumor tissue, frequently will suffice to clear up a case; but these distinctive signs are often wanting in the early stages, and an exploratory operation may be required to establish an absolute diagnosis. Therefore, in every unexplained hematuria, one ought to think of the possibility of a malignant tumor of the kidney.

CASE XXXVII.—Adenocarcinoma of the Kidney—Abdominal Nephrectomy—Death.—Charles H., aged thirty-three years, a burly butcher, was suddenly seized with cutting pain in the left lumbar region, and passed a quantity of bloody urine. Similar attacks occurred at not very long intervals, and he frequently passed gravel. In the second year from the first attack the symptoms became much aggravated, pain in the loin was almost constant, and the patient became worn out from loss of blood and suffering. A tumor was noticed in the left flank extending from a point three inches external to the umbilicus, upward and backward under the ribs. It was slightly movable bimanually, and seemed to be about

¹ I now believe that the forward extension of König's incision would have sufficed in this case.

² Walker, *Annals of Surgery*, November, 1897.

³ *Arch. f. klin. Chir.*, xlix, p. 412.

⁴ Israel, *Ber. klin. Wochenschr.*, vol. 26, p. 125.

seven inches thick. The urine contained no abnormal elements except blood.

December 2, 1886, an exploratory incision was made in the left loin and the kidney exposed. No calculus could be felt either by thorough palpation or by thrusting a hat-pin into the kidney at several points. The diagnosis of sarcoma was made, and it was evident that the kidney was too much enlarged to be removed by a lumbar incision. It was, therefore, decided to resort later to abdominal section for its extirpation. Estimation of the urea showed a diminished excretion, the daily amounts ranging from 219 to 240 grains. This decreased excretion is said by Thiriar to be characteristic of malignant tumors.

January 20, 1887, an incision five inches long was made along the outer margin of the left rectus, the abdomen opened, the intestines pushed aside, and the peritoneum covering the kidney to the outer side of the descending colon incised. The diseased kidney was readily dissected free with the fingers, and its pedicle was tied *en masse* with floss silk. A heavy clamp was placed on the vessels between the ligature and the kidney, and the latter was removed. By the slipping of the clamp a vein which was not included in the ligature bled freely, but it was easily seized and tied (an advantage of the abdominal method of nephrectomy). Considerable bleeding took place for a time from the fibrous envelop of the kidney, but the total amount of hemorrhage was in no way alarming. The lumbar scar was reopened for drainage, and a rubber tube was led through it to the site of the kidney. The rents in the posterior and anterior layers of the peritoneum were then closed, and the wound in the abdominal wall approximated by silver wire and catgut sutures. On account of gastric irritation no fluid was introduced into the stomach during the following week, during which time nourishment was administered *per rectum*.

The amount of urine passed was as follows: First day, 8 ounces; second day, 20 ounces, and somewhat bloody; urea, 1.01 per cent.; specific gravity, 1020; third day, 49 ounces; fourth day, 88 ounces. After that it gradually subsided until the daily amount was 50 ounces, the urea being still below normal; though of greater amount than before operation. The patient recovered without incident. The extirpated kidney measured $9 \times 5 \frac{1}{2}$ inches, and weighed 21 ounces. It was invaded by a tumor about as large as the fist, which was everywhere marked off by a distinct capsule. Microscopically it was found to be an adenoma. The patient remained well for a year when a recurrence took place from which he succumbed eighteen months after the nephrectomy.

CASE XXXVIII. *Sarcoma of the Kidney—Nephrotomy—Death.*—James L., aged seven years, was seen by me with Dr. J. B. Hunter, January, 1886. There was a history of failing health, some irritability of the bladder, but no hemorrhage or pus in the urine, though diminished urea was observed in a late examination. Three weeks before, his physician had recognized a swelling in the left upper half of the abdomen, which, when seen by me, was the size of a cocoanut, projecting downward to the umbilicus, very slightly movable, painless, and not at all tender. It could also be felt in the loin. A few days previously, an aspirator-needle had been introduced, and through it about one-half ounce of a slightly turbid deep yellow fluid and a little fresh blood had been withdrawn. It was hoped that a cyst or hydronephrosis existed, though his pallor and weakness were greater than should accompany such affections. Early in March a lumbar exploratory excision was made, but the repetition of aspiration on the exposed posterior surface of the enlarged kidney did not show any cyst. An incision was made into the soft mass, which appeared sar-

comatous. The hemorrhage from the incision proved very troublesome, and by the time it was arrested no thoughts of anterior nephrotomy could be entertained. So much was the little patient weakened by the operative effort added to that of the disease, that he succumbed twenty-six hours thereafter. No autopsy was granted.

CASE XXXIX. *Carcinoma of the Kidney—Abdominal Nephrectomy—Death.*—Alexander P., aged fifty years, sent me by Dr. Ross of Montreal, entered St. Luke's Hospital February 27, 1891. The family history was unimportant, except that one sister died suddenly of cerebral tumor, and an aunt of cancer. Since 1888 the patient had suffered from indigestion with vomiting and slight jaundice, growing gradually worse with slight loss of flesh and strength. The year previous to admission, he had noticed a fullness on the right side of the abdomen accompanied by some pain, and the presence of a tumor was determined by several physicians. There were no urinary symptoms. The urine was acid, of a specific gravity of 1024, and contained a trace of albumin, but no sugar. In the sediment were a few leucocytes. The swelling in the right side was found to lie partly behind the distended colon, and a diagnosis of retroperitoneal cyst, probably connected with the kidney, was made.

March 2, 1891, the abdomen was opened by an incision along the outer margin of the right rectus muscle and a heart-shaped tumor exposed, which was adherent to the omentum and intestines.

The adhesions were separated, and the posterior peritoneum which covered it was divided. In the attempt to peel off the peritoneum to attach it to the anterior abdominal wall, and thus close off the peritoneal cavity, the tumor was ruptured, and about one quart of greenish inodorous fluid escaped in among the intestines from a cyst of the kidney. The cyst and kidney were removed after ligation of ureter and blood-vessels. A lumbar incision was made for a drainage-tube, and the abdomen closed, after cleansing and uniting its posterior divided layers.

The patient stood the operation well, but died within eight days of suppurative peritonitis. The kidney was found upon examination to contain a large cyst about five inches in diameter, from the wall of which projected masses which microscopic examination showed to be cancerous. The substance of the kidney itself was nearly normal.

METHOD OF OPERATION.

The lumbar incision as described in the cases cited, that is to say, a cut extending from the twelfth rib downward parallel to the edge of the quadratus lumborum muscle, and then, when near the ilium, curving forward as far as the anterior superior spine, or further if necessary, is, on the whole, the most satisfactory of the various incisions I have employed. Its length forward enables the operator to meet promptly accidents and complications. This incision is called König's, but is also claimed by Ancona. The muscular layers of the anterior portion of the incision are divided rather than separated, as has been suggested by Abbe, until the peritoneum is reached, and then the surgeon will have free access, not only to the kidney and its vessels, but also to the ureter, etc. The value of such an incision was well illustrated in Case XVIII., in which a torn vena cava was promptly recognized and sutured without difficulty.

The success previously alluded to (obtained in my last ten nephrectomies, performed during the past two years with but a single fatal result, and the last six of which

were consecutively successful) I largely attribute to the complete view of the operative field which follows even a freer extension of this incision anteriorly than in my earlier cases. The mortality, however, in the total of my twenty-five cases of nephrectomy herewith presented, is twenty-eight per cent.; which is only slightly better than the percentage in 180 cases recently presented by Tuffier, Israel, Newman, and Hamill, their mortality being thirty per cent. In their cases the lumbar incision was generally employed. Emphasis is again laid on the preference for division of the muscular layers of the abdomen; for though it is theoretically true that this separation of the muscles and their subsequent replacement affords a more solid wall, yet the usual method of carefully suturing in layers the divided abdominal fascia and muscles up to the vertical leg of the incision, and even a part of this if judgment so inclines, restores very happily the *status quo ante*. Moreover, in the comparatively few instances in which a certain amount of weakness and yielding of the cicatrix has resulted in a lumbar hernial bulging, it has usually shown itself in the vertical scar, that is to say where the drainage gauze had been left; and in none of these instances has the patient expressed any discomfort or inability from the weakness of the abdominal wall. Inquiry has been particularly made upon this point, as reference to the cases will show.¹

For the removal of large tumors the anterior abdominal incision along the outer edge of the rectus abdominis muscle has been occasionally chosen. This is usually carried out as in ordinary abdominal work; but sometimes, when it has been revealed, as in Case XXXVIII., that a cyst is associated with the neoplasm, and once when an abscess was included in a tumor, the divided posterior edges of the peritoneum were attached at numerous points to that of the abdominal wound, thus shutting off the peritoneal cavity, and the extirpation of the diseased kidney accomplished by the so-called transperitoneal method. Anterior or abdominal nephrectomy is known to be more dangerous than lumbar, but it allows, of all operations, the best access to the vessels, etc., though since the increased prolongation forward of the lumbar incision, the anterior route with me has ceased to be employed. The difference in mortality of the two methods, lumbar and abdominal, has been given by Tuffier as twenty-eight per cent. in the former, and thirty-six per cent. in the latter.

For exploring the kidney or ureter for a suspected calculus, a few details may properly be discussed. The liberation and separation of such kidneys, particularly if not enlarged by abscess, may be accomplished, especially on the right side, so freely that the affected organ can as a rule be brought into and even out of the wound to allow careful palpation, and if exploration with the finger be decided upon, as it should be rather than relying upon untrustworthy prodding with needles, the pedicle of the kidney may be slipped between the second and third fin-

gers of the left hand which will at the same time not only support and hold steady the kidney but facilitates compression of its vessels, so that when the exploratory incision is made into its substance to reach the pelvis with the introduced finger and sound, but little bleeding will occur. Usually the hemorrhage is not severe, even when compression is not employed; but I have once, under such circumstances, been compelled to plug the wound and postpone further examination for three or four days. At the close of such an exploration, with or without the extraction of a calculus as the case may be, it is my custom to pack the renal pelvis with a wick or string of iodoform or sterile gauze, and to suture the kidney wound with deep catgut stitches except at the point of exit of the gauze.

This same lifting-out of the kidney renders possible the better use of the X-rays for the detection of small calculi, as has been lately suggested by Fenwick, and already alluded to under "renal calculus."

The examination of the ureter for a moderate distance is easy by the operative incision described above. This will permit its palpation for two or three inches below the crest of the ilium. Internally the ureter may be examined through the incised kidney. When the lower end of the latter is strongly tilted or pulled up, by a ligature passed through it a flexible steel probe may be introduced and pushed through the whole length of the ureter. This requires a probe much longer than is anticipated. I have lengthened my own probe (after a number of trials) to twenty-three inches. It requires from nineteen to twenty-three inches of the probe to reach the bladder from the loin incision. Only once have I been able to feel the probe end in the bladder by means of a sound introduced through the urethra, though in a number of instances it has been passed to its full length. The advantage of a metallic instrument in the detection of a calculus is evident, as well as is its greater ease of introduction. It is, however, not easy to pass such an instrument into the ureter in all cases. One cannot always find the ureteral orifice in the renal pelvis. For help in this endeavor, I employ open-ended catheters of various curves (Fig. 1), through which, when introduced into the kidney pelvis, the flexible probe is carried and swept about in search of the desired outlet. When the probe is engaged in the canal, the catheter is slipped over its distal end and removed, and the probe is gently pushed onward. The length of the ureters, from the pelvis of the kidney to the bladder, varies from 26 to 34 cm. (10 to 14 inches) according to Huntington and to Funkel,¹ but the ureters are easily stretched. On exploration, when the ureters were normal, I have often found the length above given to be exceeded by reason of this extensibility, which is brought about by the resistance offered to the passage of a probe, even though flexible, through these doubly curved tubes.

When a cyst or cavity is a large one, turning the dilated and thinned kidney inside out as was done in Case XXV., will aid in finding the ureteral opening. The difficulty is sometimes great in appreciating an obstacle in the ureter, and one should, before condemning a kidney to extirpa-

¹ Since the above was written Dr. A. McCosh exhibited, at a meeting of the Surgical Society, a patient with lumbar hernia following nephrectomy, which, emerging from the vertical portion of the incision through an opening one-half inch in diameter, gave great discomfort and demanded surgical interference.

¹ *Deut. med. Wochenschr.*, April 29, 1897.

tion, either open the pelvis for exploration, either digital or otherwise, or pass a catheter from the bladder to the kidney (Albarran); or, as I propose doing in my next case, incise the ureter fairly low down in the lumbar wound, and from this point of entrance explore the kidney.

In ligating the renal pedicle the ureter is separately secured with fine catgut, and commonly the vessels are tied *en masse*. Strong silk is used in preference to thick catgut, the sterilization of which is often doubtful. Lately, care has been taken to employ a method which will permit the withdrawal of the ligatures from the third to the seventh day after the operation, as may be determined upon. To this end is followed either the plan of Cleveland¹ of enclosing in the ligature the wire loop of a galvano-cautery, or that of Grad² of placing in each turn of the knot a releasing pull-thread. I have employed each of these contrivances with the happiest results, preferring, however, the latter for its simplicity.

I also venture to call attention again to the temporary packing of the large cavity left after a nephrectomy. (See Case XXV.) This not only controls the hemorrhage very well but drains most efficiently. The central packing is removed within from twenty-four to forty-eight hours,

FIG. 4.



FIG. 5.



Fig. 4.—The liver and right kidney seen from the front. (Cunningham.)

Fig. 5.—A profile view of the liver and kidney. (Cunningham.)

and the exterior layer, constituting the Mikulicz bag, comes away on traction before the ligature is removed. In all renal operations anesthesia by ether is preferred to that by chloroform, as the latter has been fully shown by my own observations, as well as by those of others, to affect the kidney more seriously than does ether.³

A final word on the subject of the detection of renal enlargement. A long experience has convinced me that when, on the right side particularly, the kidney can be palpated on bimanual examination, it is either an enlarged kidney or a movable one. If the latter, beside the usual means of displacing and replacing it, it is always advisable to put the patient in an erect posture, resting the hips against the edge of a table, and then leaning forward with the hands or head against a support. This relaxes the abdominal walls and permits an easy repetition of the bimanual test. In all varieties of renal and gall-bladder enlargements, etc., I have frequently had much success in placing the patient in a sitting posture, in bed,

leaning forward, with the hands clasping the legs above the ankles, which similarly relaxes the abdominal walls, and allows the surgeon's hands to pass well backward beyond the edges of the ribs, and well over the under surface of the liver.

In confirmation that a normal kidney is not to be felt anteriorly below the liver, I ask attention to the accompanying diagrams (Figs. 4 and 5) of results obtained by Professor Cunningham of Dublin.¹ Here it will be seen that such a small portion of the kidney projects below the liver as to be only rarely palpable. The recent investigations of Brewer also confirm this statement. Myles, in the article just quoted, also shows clearly the risk of probing a kidney of normal size or only one moderately enlarged through the skin; for there is risk, not only that the needle may perforate the peritoneum, but that a vessel or intestine may be punctured.

MEDICAL PROGRESS.

Two Cases of Sarcoma Cured without Operation.—OWENS (*New Orleans Med. and Surg. Jour.*, July, 1897) reports two cases of sarcoma of the leg below the knee in which complete cure followed injections of the mixed toxins of erysipelas and the bacillus prodigiosus. Sixty-three injections were employed in each case, the smallest dose being one-half a minim and the largest 10 minims. In one case, the diagnosis was confirmed by a microscopic examination, the tumor being a giant-celled sarcoma of the tibia following a contusion.

The Disappearance of Warts.—ROUSSEL (*The Med. Press and Circular*, November 3, 1897) takes up the question of the disappearance of warts and mentions a great number of instances, undoubtedly accurate, in which warts have disappeared within a few days after the application of the most ridiculous remedies, such as the liver of the male goat, the skin of a serpent, the soles of old shoes steeped in wine, rancid bacon, salt water, etc., etc. According to this writer, the theory of suggestion is the only one which will explain the disappearance of warts immediately after such varied treatment. Bonjour employs suggestion with intention, making a few cabalistic passes and telling the patient that the warts will disappear. Thus far, his prediction has never failed. The word suggestion does not reveal to us the intimate mechanism of the nervous centers, but it is sufficiently clear to be understood by all medical men. That an impression of a psychic order can bring about a durable anatomic modification of the papillary bodies is of extreme interest to all reflective minds.

THERAPEUTIC NOTES.

Vulvovaginitis in Children.—COMBY (*Jour. de Méd. de Paris*, October 3, 1897) says that the vulvovaginitis of little girls is almost always of a specific character, but almost never of venereal origin, being acquired in an inno-

¹ Weir, *MEDICAL NEWS*, April 3, 1897.

² *Amer. Gynec. and Obstet. Jour.*, February, 1897.

³ Weir, *N. Y. Med. Jour.*, November 16, 1895.

¹ Myles, *op. cit.*

cent manner from towels, sponges, etc. External application of small douches are not sufficient to meet the indications. It is necessary to employ prolonged irrigations through a small flexible catheter or tube; for instance, a quart or more of a strong antiseptic solution, such as corrosive sublimate, 1-10,000 or 5000, permanganate of potash, 1-4000 or 2000, or even 1-1000. With a weak antiseptic solution it requires from two to six months to cure a vulvovaginitis. With a strong solution this may be accomplished in fifteen days. If the affection is very intense, the irrigations should be made three times daily, and as improvement is manifested the number may be reduced to two each day, one a day, one every two days, twice a week, etc. In simple vulvitis strong injections will do no good. The only treatment required is to bathe the vulva with plain boiled water, or a weak solution of boric acid, two or three times daily, and to powder the parts, or to smear them with some hydrophilic ointment.

In all cases the toilet of the diseased parts should be most carefully directed, and the possibility of the conveyance of the contagion to other children should be kept in mind. The general health of the patient will also require attention.

Treatment of Enuresis.—MARTIN (*The Med. Press and Circular*, December 15, 1897) gave a boy, aged seven years, who for some months had been in the habit of wetting his bed three or four times each night, the following mixture:

R Potass bromid.	3 ij
Tinct. belladonnæ	3 ij
Tinct. chloroformi co. . . .	3 j
Aq. ad.	3 vj.

M. 3 ss. at 4 P.M., and a second dose at bedtime.

From the time when this was first administered there was no recurrence of the enuresis. The patient, in this case, was an active-brained boy, of athletic disposition, who was keenly alive to the desirability of overcoming his habit, but who had been unable to do so in spite of all endeavors. There was no phimosis, no adhesions, and no collection of matter beneath the foreskin to explain the constant recurrence of the affection. There were no symptoms referable to the bladder, no history of worms nor intestinal irritation, and the patient was not accustomed to lie on his back. The source of the mischief seemed to be in the direction of some form of cerebral excitement. The cure was perfect up to the time of report, about one month after the medicine was first given.

Treatment of Tuberculous Cystitis.—BANZET (*Centralb. für die Gesamte. Ther.*, November, 1897) recommends irrigation of the bladder with corrosive sublimate solution in cases of tuberculous cystitis. In his experience remarkable results have followed the use of this treatment, although he does not pretend to explain exactly how they are produced. Other antiseptics employed for a similar purpose, such as iodoform, lactic acid, sulphate of copper, formaldehyd, carbon dioxide, creosote, etc., have not given, in his hands, equally good results. The sublimate is used at first in a solution of 1 to 5000, and only

after a considerable time is the strength increased to 1 to 4000, or even to 1 to 3000. A rapid increase in concentration may produce pain and hemorrhage. Thirty-nine patients were treated in this manner, and of these he considered six as entirely cured. Injections of guaiacol also gave good results. They have an anesthetic influence upon the mucous membrane of the bladder which is very grateful to the patient. If the pain cannot be relieved by medical measures, operations are necessary, of which suprapubic cystotomy, peritoneal drainage, and curetting may be mentioned. Curetting the neck of the bladder in a male may be performed through a minute perineal opening, and in the female through the urethra. This slight operation associated with subsequent drainage often produces remarkable relief. This method of treatment is preferable to suprapubic cystotomy in these cases.

There are, from a bacteriologic standpoint, two classes of cases of tuberculous cystitis. Those in which a great many bacilli are found in the urine, and those in which very few are found, or, possibly, no micro-organisms at all. Therapeutically, cases of the latter form are much more easily influenced by injections of corrosive sublimate. These may be cured in a short time. However, in the more severe forms the disease may be brought to a standstill, or even cured under favorable conditions. Naturally, general should be combined with local treatment.

Difficulties of the First Dentition.—In troubles due to teething, GHOMPRET (*Rev. de Therapeut.*, December 1, 1897) recommends that the mouth be frequently washed from early infancy up, with a solution of chloral hydrate, one per cent., an analgesic and antiseptic preparation with only feeble toxic power. Pruritus may be allayed by frequent rubbing of the gums with the following mixture:

R Cocain hydrochlor.	gr. ij
Chloroformi	gr. xv
Glycerini	3 v
Aq. rosæ	gtt. vj.

For coryza, the nose should be irrigated with a lukewarm solution of boric acid or chloral hydrate. If the gums are distended they should be lanced. If necessary, tonic treatment should be employed.

Preventive Treatment of Alopecia.—DEICHLER (*La Méd. Moderne*, November 6, 1897) points out the need of the organism of gelatinous and colloidal substances if the hair and nails are to be kept in a healthy and active condition. He prescribes, for those of his patients who are troubled with premature loss of hair, soups made of the bones of young animals, or of commercial gelatin which contains gelatinous matter from the fibrous as well as the osseous tissues. When the patients have taken these articles regularly for a few days there is a noticeable change in the condition of the hair and nails. The nails become clearer and smoother, and the hair becomes stronger and shows less tendency to drop out. With this general treatment should be combined local treatment of the scalp, and, in the opinion of this author, frequent washing of the head with soap is one of the most useful procedures.

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SATURDAY, FEBRUARY 12, 1898.

THE NEW YORK CITY BOARD OF HEALTH AND THE MEDICAL PROFESSION.

At a recent meeting of the Medical Society of the County of New York the question whether midwives should be educated and licensed or abolished was presented for discussion. Finally a resolution was offered demanding that a bill be introduced in the Legislature which would "wipe out" the guild of midwives, whereupon one man had the insight and the courage to rise and insist that by the endorsement of such a resolution the Society would simply make itself ridiculous not only in the eyes of the community but of the entire State of New York. This warning appealed to the good sense of the Society, and the resolution was voted down.

At the present time there is a bill before the Legislature restricting the powers and acts of the New York City Board of Health. It is to be regretted that some one has not the foresight and the courage to declare with convincing force that the provisions of this bill are designed to make the profession of New York City ridiculous, not only in the eyes of the local profession, but also of the entire country. He who stands in the way of progress in these latter days, sooner or later is overthrown, and the wise

course for the medical profession is to regulate and direct progressive forces when possible rather than endeavor to obstruct and suppress.

It has long been recognized and deplored that there does not exist in this country a scientific, disinterested, authoritative, governmental department of medicine whose duty it should be to declare officially the remedial efficiency of new drugs, to test the quality of all pharmaceutic and bacteriologic preparations, and so guarantee to the physician the efficiency of the agents constituting his armamentarium. Quietly, unostentatiously, almost unconsciously, there has grown up in our midst just such an authority, controlled and animated by a true scientific spirit, free from bias and personal aggrandizement. Clearly reference is here made to the New York Board of Health. The quality of the work done in its laboratory is recognized by all scientific men as of the first order. It has not only enabled the profession of New York to have at its disposal the best facilities for ensuring the bacteriologic diagnosis of diphtheria, but has also placed in its hands the best antidiphtheritic serum to be had anywhere in the world. It has not only kept abreast of the most advanced scientific ideas but in many instances has been the leader. As a matter of fact the first diphtheritic serum which was manufactured in this country was produced at the laboratory of the New York City Board of Health. With a most commendable conception of its duty to humanity it opened the doors of its laboratory to representatives from other boards of health throughout the country and to employes of firms which have now become producers of bacteriologic products. It thus appears that the New York Board of Health has been a school of instruction from which knowledge of modern bacteriologic methods has been disseminated all over the country. It has also steadily kept before it the fact that serum-therapeutics is still in the experimental stage and offers unlimited opportunities for improvement. By means of carefully conducted experiments the quality of antitoxic serum was steadily improved in its laboratory until it actually surpassed that made in any other laboratory in the world.

It can be said, without danger of contradiction, that diphtheria antitoxin, which is now accepted the world over as a specific in diphtheria, would certainly not have been used in this city or State to anything

like the extent it is now employed had it not been for the pioneer work of the New York City Health Department. All the producers of reliable antitoxin in this country are directly indebted to the laboratories of this Department for assistance in the production of this remedy, if, indeed, they are not wholly dependent upon it for the instruction and encouragement they received there. The virulent cultures which were obtained by this Department were sought by all biologic laboratories, not only in this country, but even by those of England, France, and Germany. Not only has this laboratory thus surpassed the laboratories of the world in procuring the best grade of diphtheria antitoxin, but it has improved by its investigations the quality of vaccine lymph and the methods of its preservation. With the glycerinated vaccine pulp now employed by the Board of Health such results are obtained in primary vaccination as surpass all previous experience. In more than 20,000 primary vaccinations made by the employes of this department during the past year, and which were subsequently inspected, nearly ninety-nine per cent. of successful results were obtained. As to the propriety of the Department undertaking this work, it may be said that vaccine virus is produced by or directly under the immediate supervision of the government in Great Britain and every other country on the European continent. There is no other producer of vaccine virus in New York State.

All antitoxins other than diphtheria antitoxin are as yet largely experimental. No commercial house can afford financially to undertake and carry on such experimental investigations as are necessary to determine the methods of production and the value of the efficiency of such unstable products. They will produce and offer for sale only such preparations as are profitable to them directly or indirectly, and as there are only three producers of diphtheria antitoxin in this country, the probabilities are that if the New York City Board of Health is restrained from manufacturing this product the price will soon be placed at such a figure as to be beyond the reach of all except the very rich.

More might be said in justification of the high estimate we have placed upon the work of the New York City Board of Health: of its production of streptococcic and tetanus antitoxins; of its thoroughly

systematic and scientific methods of controlling the spread of pulmonary tuberculosis; of its high position as an authority in pronouncing upon the quality of biologic products manufactured in other laboratories, and, finally, of its superb results secured in reducing the death-rate in the city of New York to a percentage unparalleled in its history. Is it not the duty rather of the medical profession of this city, of the State, and, indeed, of the entire country, to encourage and maintain the permanent establishment of this magnificently organized institution?

The feature of the bill now before the Legislature which appeals universally to the medical profession is the clause removing a political disability from members of the medical profession, *viz.*: the inability under the old law for a member of the medical profession to hold the position of president of the Board of Health. This political disability was an indignity offered to the medical profession which all with justice resented, and, therefore, gave cordial approval to a measure which restored medical men to a political equality with their fellows. But attached to this bill there have crept in numerous modifying clauses as riders, which, if enacted into law, will so cripple the Board of Health as to incapacitate it for a continuance of the work which, as we have said, has called forth not only the admiration of this community, but of the world.

Is it not, therefore, the duty of the medical profession to cast its powerful influence against this bill and so witness to the community that they are ready, as ever, for the benefit of humanity, to carry preventive medicine to the very fullest limit justified by modern science.

SOME CONSIDERATIONS OF THE BILL RESTRICTING THE POWERS OF THE BOARD OF HEALTH.

THE framers of this bill, by one of its provisions, assume to determine for all time what diseases shall be regarded by the sanitary authorities as infectious, contagious, or pestilential, and in so doing have excluded such diseases as the plague, relapsing fever, puerperal fever, tuberculosis, leprosy, contagious influenza (*la grippe*), epidemic dysentery, and all the contagious diseases of the eye and skin.

Under the provisions of this bill the Department of Health of New York would be powerless to act (until special legislation was obtained) in the pres-

ence of an epidemic of relapsing fever, or the introduction into the city of the bubonic plague from the East, which is possible at any time.

The chief purpose of the provision specifying what diseases should be regarded as contagious or infectious is to exclude tuberculosis or consumption from the list of the diseases over which the Health Department has power to exercise supervision; yet the contention that tuberculosis is not infectious is limited to a few, and the statistics of the world show that it destroys more lives than all the other infectious diseases combined. Nearly one-seventh of all deaths throughout the civilized world are due to tuberculosis, and nearly one-fourth of all deaths among the adult population are due to this disease, and yet the framers of this bill would exclude this scourge from the possibility of supervision by the sanitary authorities.

The provisions of the present law as now enforced can in no wise work a serious hardship to the unfortunate sufferer from the disease, and the enforcement of its provisions, it is believed, will be followed by a marked diminution in the number of cases of this affection in New York.

The sanitary authorities under the present law require that all cases of pulmonary tuberculosis shall be reported to the Health Department, and that to prevent infection measures shall be taken to render the sputum of such patients harmless. No inspection is made in cases under the care of physicians. Those who are too poor to employ a physician are visited by inspectors of the Health Department and printed instructions as to the methods of preventing infection are left with the patient and his family. The Health Department is also empowered to provide hospital accommodations for such patients as are too poor to obtain medical aid, and whose condition and environment require that they should receive such assistance. There are turned away from the general hospitals in this city each week from fifty to seventy cases of pulmonary tuberculosis chiefly because of lack of accommodation in these institutions. It is to provide for such as they that the Health Department has received during the last year \$60,000 from the municipality. This is to be expended for the care of patients admitted to various institutions at the request of the Health Department and who cannot be provided for

in the various public hospitals. This bill would prohibit the Department of Health from assisting in any way in the care of these persons.

The assertion has been frequently made that it is the intention of the sanitary authorities to isolate and segregate from the community cases of pulmonary tuberculosis, and to provide special hospitals for the accommodation of patients suffering from this disease, these hospitals to be under the care of the Health Department, and the treatment to be directed by its officers. The sanitary authorities have frequently denied that such is the purpose of the Health Department, and have repeatedly stated that they do not propose to carry out any such plan. It is their purpose to educate the public whose interest is the greatest to prevent the spread of pulmonary consumption, so that they may be enabled to carry out the simple measures necessary to accomplish this, and they do not propose to establish special hospitals under the management of the Department. That the present law and the methods used to enforce it have the sympathy and approval of the public and of scientific medical men, cannot be doubted. No sufficient argument has yet been advanced to show the necessity of the proposed changes in the law. The bill now under consideration, if enacted into a law, would remove the safeguards aimed to prevent the spread of consumption in New York, and this the people will justly resent.

THE BRITISH MEDICAL COUNCIL.

VICTOR HORSLEY has been recently elected one of the Representatives on the General Medical Council of Great Britain.

The General Medical Council is a sort of board of examiners and licensing, and is composed of eight members chosen by the medical colleges of England, eight by the colleges of Scotland, five by the colleges of Ireland, five nominated by Her Majesty, and five elected by the medical fraternity at large; the latter are known as direct representatives, and are, as a rule, chosen from among the general practitioners of the smaller towns. The members who represent the colleges are nicknamed "academic respectabilities," while those named by the Queen are called "their officials."

Horsley's election was a close one, his strongest

opponent being Michael Foster, the eminent physiologist.

The election is conducted by letter vote. In the present instance about 22,000 voting papers were sent out to the registered physicians of Great Britain and Ireland and a return requested within a certain time. Only 14,000 availed themselves of the opportunity. Several hundred ballots were ruled out because of improper marking, lateness, etc. Horsley received 7000 votes and Foster 6100; a few hundred were divided among the remaining candidates. While the General Council has very limited powers, the general practitioner looks to it for all sorts of things. According to one prominent medical journal the physicians regard it "as a kind of fairy god-mother whose business it is to provide silver spoons for her professional children, and to shield them generally from the slings and arrows of outrageous Fortune."

The Council provides for the entrance examination of students in medicine and examines them again before registering them as practitioners. Its real title is "General Council of Medical Education and Registration of the United Kingdom." Sir Richard Quain is its presiding officer.

It has only been a few years that the general profession has had direct representation in this council, and those who uphold the system are afraid that if in future elections so large a proportion of the profession abstain from voting as obtained in the present instance, the privilege will be taken away from them. Of the 22,000 voting papers distributed, 8000 (or considerably more than one-third) were not returned. The election occurs once in seven years; the present election was made to fill the unexpired term of a member who had resigned.

ECHOES AND NEWS.

Excision of the Stomach.—Unsuccessful attempts have been made by surgeons in St. Louis and Milwaukee to repeat the operation of total excision of the stomach, which was successfully carried out by Dr. Schatter of Zurich.—*Science*.

The Dispensary Bill.—The Senate Committee on Public Health has reported favorably on the Dispensary Bill introduced by Senator Sullivan in the New York Legislature. One amendment to it was made, providing that the action of the State Board of Charities may be reviewed by the Supreme Court of the State.

New Editor of the British Medical Journal.—At a recent meeting of the Council of the British Medical Associa-

tion, the assistant editor, Dr. Dawson Williams, who for seventeen years has been connected editorially with the journal, was unanimously appointed editor. Mr. C. Louis Taylor, who has been sub-editor for the last eleven years, was appointed assistant editor.

Epidemics at Barre, Vt.—The news comes from Rutland that 170 cases of diphtheria and 130 cases of typhoid fever have been reported in Barre, Washington County, which has a population of only 4000. A large number of deaths have occurred. The State Board of Health is making an investigation as to the cause of the double epidemic.

"Faith Cure" in Indiana.—Advices have been received from Indianapolis that warrants have been issued for the arrest of "Dr." J. L. Stevenson and Samuel Fuller, leaders of the "Christian Scientists" in Jackson township, on the charge of manslaughter. They are held responsible for the deaths of a child of the former and the wife of the latter, both of whom died without receiving medical attention.

The Voluntary Determination of Sex a Proprietary Idea.—It is reported from Vienna that Professor Schenk has prepared a paper in which he describes his system for determining the question of sex. The rights to publish this pamphlet have been sold in Germany for \$10,000. There is a stipulation, however, that it shall not be published until the American and English rights have been disposed of.

Hospital Sued for Damages.—According to a decision recently rendered by Justice Goldfogle in the Fifth New York District Court, charitable institutions are not responsible for damages which may be inflicted by their agents and servants. A suit in which this decision was rendered was brought against Roosevelt Hospital, New York, by a man whose bicycle was demolished by an ambulance belonging to that institution.

Plague Measures in Bombay.—Recent despatches from India say that quarantine barriers are being established in all the towns against the Bombay exodus. The Governor, fearing that the plague will increase rapidly within a few weeks, and that the penning up of the large population will result in a panic, has issued an order inviting those affected to remove themselves and their families to a camp on the islands across the harbor. Regiments have been ordered to Bombay for plague duty.

Register of Licensed Physicians Practising in Illinois.—The twentieth annual report of the Illinois State Board of Health to be published soon will contain an official register of all licensed physicians practising in Illinois. The secretary of the Board, Dr. J. A. Egan, in order to ensure accuracy, requests that every physician entitled to the privilege who desires his name and address correctly reported to send the information to him on a postal-card at once, mentioning number and date of certificate.

Radical Treatment of Smallpox at the Immigration Bureau.—A case of smallpox was recently discovered in the detention quarters of the Immigration Bureau at New York.

The patient was a Russian, who arrived on January 22nd from Rotterdam. He was at once sent to the Riverside Hospital, and the detention-room, articles of clothing and bedding were fumigated, and the ninety other detained immigrants and those of the employes who had come in contact with the patient were vaccinated.

Indian Plague Riots.—Recent news from Bombay indicates the steadily advancing increase of the bubonic plague. The superstition and opposition of the native population are serious bars to the application of sanitary measures. In the neighborhood of Bombay fatal riots have been occasioned by the efforts of the health authorities to prevent the spread of the disease. The rioters have killed a hospital assistant, burned the segregation camp, wrecked the post-office, and cut the telegraph wires.

Professional Opinion Regarding the Board of Health Bill.—It is gradually becoming known that a strong, intelligent branch of the profession of New York is opposed to the Brush Bill now before the Legislature. Evidences of this are rapidly becoming apparent. Dr. Jacobi has placed himself upon record as opposed to the bill by resigning from the Special Committee of the County Medical Society appointed to consider the bill. Resolutions in opposition to the measure have been unanimously passed by the visiting-staffs of Bellevue, New York, Presbyterian, Roosevelt, and St. Luke's Hospitals, and the Hospital for Contagious Diseases.

The New Philadelphia Health-Officer.—Dr. Benjamin Lee secretary of the State Board of Health and of the State Quarantine Board, was recently appointed by the Governor Health-Officer of Philadelphia, to fill the vacancy caused by the resignation of Theodore Stulb. Dr. Lee was graduated from the Medical Department of the University of New York in 1856, and formerly resided in this city, but removed to Philadelphia in 1866. He is widely known as a specialist in orthopedic surgery, nervous affections, and mechanical therapeutics. He introduced the method of self-suspension in the treatment of spinal affections, and has contributed many valuable papers on the special departments to which he has given time and study as well as to the science of public health.

The Society of the Alumni of Charity (New York City) Hospital.—The eighth annual reunion and banquet of this Society was held at the Savoy Hotel, New York City, on the evening of February 2, 1898. From a social as well as a gastronomic standpoint, the gathering was a most delightful affair. About 150 covers were laid, and some of the members journeyed many miles in order to be present. In addition to the usual postprandial speeches and good stories, the Society indulged in the unusual experience of listening to a serious discussion of the dispensary question by the Reverend Dr. Greer. In response to the circular letters which were sent out asking for personal information, 150 answers were received, from which it is learned that 25 of the alumni are now either professors or instructors in medical schools, 6 are authors of standard books, and the writers of articles for medical journals are as numerous as the members themselves. Some of the

members were found located as far north as the Klondike and others as far south as South America. They are scattered through twenty-two States of the Union; one alumnus is located in Japan and one in China. The following officers were announced for the ensuing year: President, Walter B. Johnson; vice-president, W. L. Stowell; secretary, Charles J. Proben; treasurer, Henry M. Schroeder; editor, A. T. Muzzy.

The Status of the Marine Hospital Service as a National Quarantine Board.—The Senate Committee on Public Health and National Quarantine, in its report on the Senate bills concerning a national quarantine submitted to it, says: "It has not been satisfactorily shown that the yellow fever which entered the United States last summer at a point on the Gulf coast near Ship Island occurred by reason of the carelessness or negligence of the officers on duty at the Ship Island Quarantine Station. The fever first appeared at Ocean Springs, a few miles from the Station, but it is unjust to conclude on the ground of propinquity alone that it came through Ship Island. In our opinion it is wise and necessary to retain the present system of quarantine under the management of the Marine Hospital Service, with its hospitals, quarantine stations, improved apparatus for the investigation of disease germs, and corps of officers, twenty-five per cent. of whom have experience in the prevention and treatment of infectious diseases, and especially of yellow fever. It may be found expedient hereafter to expand the service into that of a department, but to do so now would mean the useless expenditure of money and the destruction of the only systematic antagonism to the invasion of contagious disease. While we believe that the quarantine jurisdiction of the Marine Hospital Service should be retained, we are clearly of the opinion that its powers should be enlarged and made more distinct and uniform. No timidity nor adherence to technicalities should prevent the adoption of any measures which are necessary to exclude contagious diseases from our shores. The experience of past years, and especially of last summer, demonstrate the absolute and immediate necessity of so amending existing laws as to enlarge and concentrate the powers of the Marine Hospital Service, so that the present sporadic and conflicting condition, in which there is constant friction and collision between Federal and State officials, shall be changed, and the exclusive, ultimate control be given to one authority."

The Source of the Yellow-Fever Epidemic Definitely Determined.—The committee of the Mississippi Legislature appointed to investigate the yellow fever of last summer has made its report, after having visited Ocean Springs, Biloxi, and other coast towns where the fever prevailed. It finds, beyond all question, that the yellow fever originated at Ocean Springs, Miss., but not from the United States Marine Hospital Quarantine Station at Ship Island, as was supposed, and it also declares that that quarantine station is not a menace or a danger to the health of the people of the Gulf Coast or of the South. Those who did not think that the fever originated at Ship Island, and was communicated by the quarantine officials to the mainland, held

that it was introduced by Cuban refugees who met at Ocean Springs in June to arrange for a filibustering expedition to Cuba, and one of whose members died of a mysterious disease and was buried at Ocean Springs. This very generally accepted theory is disproved by the Mississippi legislative committee, which finds that yellow fever was introduced into this country much earlier than it was supposed—as early, indeed, as April—and that it came, not from Cuba, but from Guatemala. The existence of yellow fever was not discovered at Ocean Springs until September 6th, and hitherto the utmost researches have not traced it back beyond the end of July. The committee finds that yellow fever prevailed during four months at Ocean Springs, and that it was introduced into this country by a Mississippi family, who had been temporarily in Guatemala and who came to the United States on the Central-American steamer "Breakwater." Their baggage was neither fumigated nor disinfected, and they went direct to Ocean Springs, where one of them was taken sick with fever. Within a few days other cases of fever appeared in their immediate neighborhood, and from that time a disease of the same character prevailed at Ocean Springs until the end of the summer, although it was not diagnosticated as yellow fever until September. The committee attributes the introduction of the yellow fever to the fact that the quarantines of the Gulf States against the West Indies and Central America go into effect on May 1st, whereas the "Breakwater" brought the disease into the country in April—before the quarantine was put in operation. This shows the necessity for early quarantine in order to assure protection. The epidemic of 1878 was brought into this country long before the quarantine was put in force, the steamer "Emily B. Souder," which brought it, arriving in March. The committee also investigated the amount of damage done by the yellow-fever scare, and found it to be greater than estimated. The loss to business in the State during the prevalence of the scare was from twenty-five to forty per cent., and property on Mississippi Sound has shrunk 30 per cent. in value because of the fever. The expense of the various quarantines in vogue was found to run as high as \$5000 in many of the counties.

CORRESPONDENCE.

PRIVATE DISPENSARIES.

To the Editor of the MEDICAL NEWS.

DEAR SIR: Before writing a word on the subject of this letter an apology is tendered to your readers. I write for information in regard to the small *flat dispensaries* springing up all over the East Side of this city. It appears that these places (one can hardly call them dispensaries) are run entirely as private affairs; in the sense that the physician in charge tries to turn each case off-ward. He may be anxious for patients because he is connected with some large clinical institution and wishes to hand material to his professor for students to examine. Go through East Seventy-third street between Second and Third avenues and you will find the words "Dispensary, Walk In," in a window, but on the door it reads, "Office, East Sev-

enty-eighth street. Again, try Eightieth street between First and Second avenues, or Eighty-third street between First avenue and Avenue A, or Ninety-fourth street, and many other streets, and see what games our very professional brethren are playing. District physicians find daily, bottles of medicine in the poor man's home without any doctor's name attached thereto, for which the patient has paid from 10 to 25 cents each. The composition of these mixtures is, as a rule, R. and S. Co., or aqua crotonis, with, perhaps, some bitter added for flavor. Is there no law, legislation, or remedy which can save the ignorant classes from this species of medical fraud?

E. C. CHAMBERLIN, M.D.

NEW YORK, January 11, 1897.

OUR PHILADELPHIA LETTER.

[From our Special Correspondent.]

DISPENSARY ABUSE—THE TYPHOID SITUATION—THE COLLEGE OF PHYSICIANS' ATTITUDE TOWARDS FILTRATION OF THE WATER-SUPPLY, AND THE PLACARDING OF HOUSES BY THE BOARD OF HEALTH—LEGALITY OF THE COMPULSORY VACCINATION LAW CONTESTED—A SETBACK TO THE BAKE-SHOP REGULATIONS—REPORT OF CONTAGIOUS DISEASES FOR 1897—DR. W. W. KEEN—DR. FRANK HAEHNLEN—THAT \$100,000 APPROPRIATION FOR THE JEFFERSON HOSPITAL—A BEQUEST TO THE PENNSYLVANIA HOSPITAL—DR. EVANS' WILL AGAIN.

PHILADELPHIA, February 5, 1898.

A SIGNIFICANT step in the movement to suppress "hospitalism" in this city was taken at a special meeting at the Charity Hospital on February 5th, to protest against the indiscriminate gratuitous treatment of patients by hospitals and dispensaries. Resolutions were adopted requesting the Philadelphia County Medical Society to confer with the Board of Charities and Correction and with the boards of managers of Philadelphia hospitals, with a view to adopting measures for the restriction of the evil. Dr. Frederick Holme Wiggin of New York City, read a paper on "The Abuse of Medical Charity in New York," and suggested that charitable institutions be placed under the strict control of a State board of charities. Addresses were also made by Drs. Horace Y. Evans, A. B. Hirsh, and others. The statements made by the several speakers at this meeting may be considered to voice the general sentiment of Philadelphia medical men on the dispensary question, which, with the multiplication of hospitals, has grown to be a matter of serious import. The present step is but an indication of what is soon to follow, for your correspondent is informed by reliable persons that the abuse is to be thoroughly ventilated, and that, as soon as the requisite data and statistics have been collected, a determined fight against the evil is to be made both by local discussion of the subject and by State legislation.

A comparative reading of this week's mortality report of the Board of Health shows that enteric fever is still prevalent in this city to an unusual extent, although it is gratifying to be able to state that the returns for the week reach a slightly smaller total than last week. There were 199 new cases of typhoid fever reported for the week just

ended (February 5th), with 16 deaths from this cause, as compared with 212 new cases and 10 deaths from the preceding seven days. In the nine weeks which have elapsed since the present outbreak, over fifteen hundred new cases, more than one hundred of which proved fatal, have occurred; and during the first six weeks of the present year almost eleven hundred new cases were reported. The chain of evidence presented by the report of Dr. A. C. Abbott, Director of the Bacteriologic Laboratory of the Board of Health, leaves no doubt concerning the pollution of the water-supply; although, as was expected, he was unable to demonstrate the presence of the specific cause of typhoid fever in the samples of water examined. The detection of the colon bacillus in some of the suspected water is direct proof that the Schuylkill water is polluted with excreta from the human intestinal tract.

At the last meeting of the College of Physicians of Philadelphia, February 2d, two topics of importance to the community at large, the immediate improvement of the city water-supply, and the obnoxious custom of placarding houses in which contagious diseases are present, were acted upon. Relating to the first, the following resolutions were unanimously adopted: "WHEREAS, The College of Physicians of Philadelphia believes that improvement in the water-supply is essential to the city's health, and even if a pure and ample source were at hand it can never be possible while the water is drawn from populous districts, to avoid all chances of contamination, nor to secure it without years of waiting; therefore, be it *Resolved*, That this college declares itself most strongly in favor of filtration of the city's water; that it believes that this should be done at the earliest possible moment, and to so much of the water-supply as money can be made available for. And further be it *Resolved*, That this college considers it unwise, undesirable, and dangerous to the conservation of the public health to permit such important municipal functions as the supply or filtering of the water of the city to be in the control of any body of men other than the government of the City of Philadelphia."

It is interesting to observe that the college has, in this latter paragraph, unmistakably recognized the fact that the control of Philadelphia's water-supply lies entirely in the power of a large clique of politicians hostile to any reform, for reasons best understood by themselves, unmindful of the loss of life which daily adds to the monument of shame against them, and prostituting their pledges as representatives of the constituents electing them to office. A committee consisting of Drs. J. K. Mitchell, A. C. Abbott, and D. D. Stewart was appointed to present the above resolutions to the city Councils. The second topic, that of placarding with yellow signs houses in which contagious diseases are present, aroused much discussion on both sides, and gave rise to a good deal of caustic criticism of the methods of the Board of Health at present in vogue, while the board itself, came in for a full share of the college's disapproval. Dr. Arthur V. Meigs opened the subject with a paper, entitled "Reasons Why the Placarding of Houses in Which There Are Persons Suffering with Scarlet Fever and Some Other Contagious

Diseases Should Not Be Continued." He declared that the custom of placarding houses is not only a source of great inconvenience, but even an inquisitorial interference with the private rights of families. He referred to the fact that in reality in many cases the non-enforcement of the law had made it a dead-letter, and he characterized the members of the Board of Health, with two exceptions, as being ignorant of the requirements of their office, mentioning, in passing, that their dereliction of duty was a matter of general admission. Dr. Meigs' statements were endorsed by many other Fellows of the college, and views concurring largely with his own were expressed by Drs. James Tyson, Henry R. Wharton, Morris J. Lewis, and others. Among those who deprecated the expression of extreme views in this matter were Drs. H. A. Hare, A. C. Abbott, and H. B. Pease, all of whom favored a more moderate view of the subject. The outcome of the discussion, during the course of which the methods pursued by the Board of Health were analyzed and criticised with no gloved hand, was the passing of a resolution appointing a committee, composed of Drs. S. Solis-Cohen, Wharton H. Sinkler, and F. A. Packard, to wait upon the Board of Health to represent to this body the opinion of the college on the subject under discussion, and to ask that the board discontinue the present custom of placarding all houses in which are cases of contagious disease.

The constitutionality of the Pennsylvania compulsory vaccination law is being contested in the Blair County courts of this State, where the local courts have issued a mandamus against the School Directors of the City of Altoona, requiring them to show cause why the children of the contesting party should not be admitted to the public schools of that city without a certificate of successful vaccination. The importance of the decision to be rendered in this case cannot be overestimated, for an endorsement of the present law in this test-case should effectually silence the protests of the antivaccinationists, and should show to their fellows in absurdity, the antivivisectionists and the faith-curers, that laws are laws, notwithstanding their many loud and hysteric clamorings for a revision of the statutes to suit their delusions.

Another law which has recently been contested on the grounds of its unconstitutionality is the "bake-shop law," which Judge Willson this week characterized as "meaningless and absurd," at the same time handing down an opinion quashing the indictments against three bake-shop owners charged with its violation. The "bake-shop law," which went into effect last summer, has already proved a valuable means for the control of the sanitary arrangements of bakeries and for protecting the health of the consumer and of the bake-shop employee, and it is hoped that Judge Willson's opinion will be speedily reversed by the Supreme Court, to which the Commonwealth will at once appeal. Pending this final decision, the State Factory Inspector, Mr. Campbell, has announced that he intends to continue to prosecute all violators of the law.

The report of Medical Inspector J. H. Taylor shows that during the year 1897 there occurred in this city 5031 cases of diphtheria, 3553 cases of scarlet fever, and

2994 cases of enteric fever, this being, as compared to the year 1896, an increase of 1840 cases of diphtheria, of 2511 cases of scarlet fever, and of 505 cases of enteric fever. Last year there was an increase of 369 in the number of deaths from diphtheria, an increase of 221 in deaths from scarlet fever, and a decrease of a single case in deaths from enteric fever. During the years there were 2388 deaths from pulmonary tuberculosis reported, or a decrease of 136 from the preceding year.

Dr. W. W. Keen, who has been convalescing at Cape May from his recent illness, has returned to the city, and expects to be able in the near future to resume his professional duties. Another medical man who has been on the sick-list is Dr. Frank Haehnlen, late of the Medico-Chirurgical College, who is again quite restored to health.

The doubt existing in the minds of the trustees of the Jefferson Medical College and Hospital as to whether a change in the building plans of the hospital of that institution would disbar them from the use of the State appropriation of \$100,000 granted them last year, has been dispelled by the announcement of the State Attorney-General that the change may be made without invalidating the appropriation. The new site for the hospital, which the institution intends to erect during the coming spring, has not yet been definitely decided upon.

The Pennsylvania Hospital has been left the sum of \$50,000 by the will of Josephine M. Ayer of Lowell, Massachusetts. If we mistake not, this Mrs. Ayer is the widow of the Ayer of sarsaparilla notoriety, concerning whom, however, comment is unnecessary, in view of the munificence of his relict.

The uncertainty regarding the bequest made by the late Dr. Evans to found a dental institute and museum in this city has been cleared up by the receipt of copies of the document by the mayor. The city authorities immediately took legal steps for the incorporation of a trust to execute the will, and an appropriation has been asked, under the terms of the will, to protect the city's interests by retaining counsel in Paris. Just how large the bequest is, has not yet been announced, but it is said on good authority that the sum is not far from \$2,500,000.

The total number of deaths occurring in this city for the week ending February 5th, was 451, a decrease of 7 from last week, and a decrease of 54 compared to the corresponding week of 1897. New cases of diphtheria numbered 93, with 23 deaths; and of scarlet fever, 56, with 6 deaths. Of the total number of deaths reported 142 were of children under five years of age.

OUR PRAGUE LETTER.

[From our Special Correspondent.]

THE POLITICAL SITUATION AND THE GERMAN UNIVERSITY OF PRAGUE—PROFESSOR VON JAKSCH'S NEW CLINIC—MEDICAL OPPORTUNITIES AT PRAGUE.

PRAGUE, February 3, 1898.

DURING December the eyes of Europe were turned Prague-ward to observe the result of the race disturbances in the Bohemian capital. For awhile it looked

as though vacillating Austrian policy would allow serious injury of life and property to be inflicted upon the Germans in Prague before stern military regulations would put an end to the rioting and wanton destruction. In the early days of December hostile Czechic mobs surged around the German University buildings. The handsome laboratories of the Medical Department especially attracted the attention of the thoroughly aroused populace. The buildings bore the hated name "German," and the mob, thoughtless of the good work which had been accomplished in them, set about their wanton destruction.

There was no question of opposition, the police for the time being were too few to be able to protect the endangered property, and the work of destruction went on almost unhindered. The chemic, anatomic, and pathologic institutes suffered most. Windows were smashed with stones, which went crashing through show cases in museums, ruining valuable specimens and preparations. The pathologic-Anatomic Museum of Professor Chiari especially suffered in this way. Not content with the damage already done the mob broke into the lower floors of some of the buildings and proceeded with their destructive work—the anatomic room of the professor of legal medicine was almost ruined.

For several days there were repetitions of the outrages. It was deemed advisable to dismiss the students of the German University Medical Department for the Christmas holidays early in December. A declaration of what was practically martial law and the hasty importation of Austrian troops from other parts of the Empire, brought the rioters to their senses. Collisions between the troops and the populace did not occur to any serious extent, and gradually the old town again became quiet. Every occasion was taken to make impressive demonstrations of the presence of additional troops, and with the desired quieting effect.

It is still considered advisable to place special guards around the German University medical buildings on holidays when the presence of large numbers of the working classes on the street might prove an occasion for further violence and destruction. In the early days some demonstrations were made by the mob before the houses of German professors, and in one or two instances these were such as to endanger the lives of the occupants. Professors Germak and Goldschmidt of the Medico-Legal and Chemic Departments being especially singled out, but on the whole the rising was distinctly racial in character and very little of personal animosity entered into it.

At Prague it is a tradition that the prominent men of a party suffer for the ideas of the party. The old town possesses the unenviable distinction of having two council-rooms, from the windows of which councillors have been, on two separate occasions, flung to destruction. On the whole the mixture of elements which compose the Prague populace are just such as are not prone to take counsel, but act first and think about it, perhaps repentantly, afterward. Everything now seems thoroughly quiet. The presence of the additional soldiers on the

streets is the only sign of the previous trouble. The German University reopened on January 10th, as usual.

The same day the diet of the Bohemian representatives for the province convened, and the last remnants of the martial law which had been allowed to remain in force up to that time was declared inactive.

The Czechs are fearful of losing, in the unsettled state of Austrian politics, the language rights so recently acquired by Austrian law, and are intent on making their feelings in the matter clear. The Czechish journals here in Prague have been fomenting racial discord, and a number of their issues have been suppressed.

For a while it seemed as though the German University might leave Prague for good. There are examples in history for such a course of action. The University of Leipzig owes its foundation to the withdrawal of German professors and students from the University of Prague nearly five hundred years ago, because the reigning king of Bohemia proposed to limit the privileges of foreign students attending the University. At a meeting of the representatives of German feeling in educational matters, held on the 28th of December last, it was proposed to transfer the present German University of Prague to Eger. Here, not far from the Bavarian boundary line, in the midst of a thoroughly German population, it was thought that it would regain its old prestige. It has gradually lost ground beside its vigorous young rival, the Bohemian University here, and under present circumstances many of the young Germans of Bohemia go either to Vienna or to one of the universities of Germany.

The expense of such a removal was an almost insurmountable obstacle. Generous offers were made, but universities are no longer, as in the olden days, merely a corps of professors and a body of students. Lecture-rooms, laboratories, hospitals, and libraries are now absolutely essential for teaching-purposes, and all these cannot be called up in a day, even when there are unlimited financial resources, which there are not—for educational purposes—in any place in Austria. Then too, to abandon Prague just now would look too much like abandoning their standards in the face of the enemy. So it is settled; the German University will remain here, and with the memory of the work which has been done within her walls, the medical world can only wish her the meed of success she so richly deserves.

Meantime, medical matters are not at a standstill. Professor von Jaksch's new clinic is being rapidly pushed to completion, and will probably be ready for partial occupancy by the time of the opening of the summer semester and entirely completed for the next winter semester. It contains some features, as might be expected since Professor von Jaksch himself has had a hand in the drawing of the plans, which seem worthy of special mention. Here in Prague, where the various contagious diseases may be expected to turn up at almost any time, owing to the unsanitary conditions prevalent, it is very necessary to guard against their introduction into the hospital wards. For all patients with fever who are admitted there is a reception ward in which they are observed for twenty-four hours, or until such time as it is absolutely sure what

the condition really is. Everywhere one finds the glazed walls, the rounded corners, and the oiled floors, which admit of thorough antiseptic cleaning.

All the wards are so arranged that no beds are placed against the walls, and no patient faces the glaring light from windows directly in front of him, but has the light fall from behind. The large, high, airy, thoroughly lighted, and ventilated wards are much more suggestive of our American hospitals than one usually sees over here. There is, besides, a recreation and a retiring-room for nurses—a feature which is almost unique in German medical institutions, and a pregnant sign that they are beginning to realize that if they would have a better class of women as nurses they must take pattern after English and American ideas, and afford them better treatment than they are accustomed to receive.

It is typical of Professor von Jaksch, and of some of the methods he has been the means of introducing into practical medicine, that the laboratories in connection with the wards should be large, commodious, inviting rooms. For all the instruments of precision a special room, centrally located as regards the laboratories, has been erected. It has special walls arising directly from the foundations, with sliding-doors which will not slam, and with special arrangements in windows and doors to prevent the entrance of dust. It is hoped, thus by lessening vibration and preventing jarring, and to as great an extent as possible the presence of dust, that even hospital scales, polariscopes, spectroscopes, etc., will really be what is expected of them, instruments of scientific precision.

Prague as it is, with its large and varied clinical material, with a teaching staff that contains some of the great names in German medicine, and with its magnificent opportunities in obstetrics, is likely to remain for many years the Mecca of a good many foreign medical students. One cannot but think that many an American who comes abroad for medical studies misses the golden opportunities to be had in many a smaller university town because he comes with the idea that his studies must be most effective if made in one of the great capitals, where the harvest indeed is great, but the laborers are legion.

TRANSACTIONS OF FOREIGN SOCIETIES.

Berlin.

TREATMENT BY MOVEMENTS IN DISEASES OF THE NERVOUS SYSTEM—NEURALGIA CURED BY INJECTIONS OF OSMIC ACID—PROPHYLACTIC VALUE OF PERIODIC SWEATS.

GOLDSCHIEDER addressed the Union for Internal Medicine, December 13th, on the subject of *treatment by movements in nervous diseases*. He has applied the theories of Frankel and Leyden in the treatment of numerous tabetic patients, who are able to learn, by using what is left of their sensibility, and particularly with the help of their eyes and muscular sense, to perform many coordinated movements which has become impossible for them without this practice. Those patients who are already bedridden must begin with simple movements, and must be protected from overdoing, as they have no means

of knowing when their muscles are exhausted. The general nutrition must also be kept up as well as possible. When patients are still able to go about, the treatment should consist not so much in complicated motions like walking, but in very simple ones, such as touching with the toes a given point. No especial apparatus is necessary. The pauses between the periods of exercise should be long to avoid overdoing; and it is well to tone up the muscles at the same time with massage and electricity, and to bandage the joints with flannel, to prevent over-extension. The speaker said that he had observed good results from this treatment in many diseases besides tabes. In the intention tremor of multiple sclerosis, which is really an ataxic symptom and is closely related to tabes, the effect of exercise is prompt. Here attempts are made to touch a certain point with the finger. The disease itself is of course not affected. In chorea, in writer's camp, and in different paralyses, improvement also follows these regular daily exercises.

KANN had tried the treatment in some thirty cases of tabes, and in three of multiple sclerosis, with excellent results. The requisites for success are patient and persistence on the part of both doctor and patient. Exercises should be carried out for an hour or two at a time, with long pauses for rest, and treatment continued for three or four months. In hemiplegias treatment should not be delayed more than four weeks after the beginning of the attack.

FRANCK presented two women who had suffered from *trigeminal neuralgia*, and whom he had cured by *injections of a watery solution of osmic acid*, 1 to 1.5 per cent. Sometimes a single injection suffices; but if the nerve is not found by the first injection, it is necessary to repeat the attempt. The injection itself is painful, but it is followed by anesthesia in the region of distribution of the nerve. EULENBERG endorsed this treatment, cautioning the members to always have a freshly prepared solution, as solutions of osmic acid decompose easily.

At the session of this Society December 20th, JARISLOWSKI said that the *prophylactic value of periodic sweats*, which is claimed by Ziegelroth, is not yet proved. They have a great value in stimulating and cleansing the skin. For some persons the steam baths are more to be recommended, and for other Russian baths. He cautioned against too long continuance of a steam bath.

BELOW spoke of the use which is made of sweats in the tropics to cure syphilis, by allowing patients to lie in heated river or sea sand. This treatment increases the pigmentation of the skin, as sun baths do. This effect of heat, without sunlight, upon the pigment of the skin ought to be further studied.

Medical Anachronism in Fiction.—Harry Thurston Peck, Professor of Latin at Columbia University, in a review of "Quo Vadis" says: "There is an anachronism involved in the introduction at the end of the ninth chapter of a freedman 'with his face marked with smallpox'; for no mention of smallpox in Europe is found till four hundred years after the period described in 'Quo Vadis,' and no Roman author speaks of such a disease."

SOCIETY PROCEEDINGS.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, Held January 4, 1898.

THE President, B. SACHS, M.D., in the Chair.

RACHITIS; PETIT MAL; ARHYTHMIA OF THE HEART.

DR. WILLIAM HIRSH presented two boys, brothers, one being six, and the other, three years of age. When each one was a year old a severe epileptic attack occurred, and this was succeeded by frequent attacks of *petit mal*. Almost immediately after the first attack the father noticed something wrong with the eyes. Examination now shows an internal strabismus, apparently due to a paralysis of the right external rectus muscle. Both boys are very markedly rachitic, and in both the heart's action is of that type which the Germans call "gallop rhythm." Both boys present in like degree that scaly condition of the skin, termed ichthyosis. In the eyes of both children there is a condition identical with that described in the adult as "choked disc." Both children exhibit choreiform movements, and both are idiotic. The speaker said that there does not seem to be a single lesion which will explain all these symptoms. There is no history or other evidence of syphilis. A little girl of the family, born between these two children, is well developed, both physically and mentally. The father and mother are cousins.

DR. LANDON CARTER GRAY remarked that attacks of *petit mal* in rachitic and choreic children are by no means uncommon. These cases usually recover under a treatment which improves the general nutrition.

DR. W. H. THOMSON remarked that the rhythm of the heart appeared to be due to hypertrophy of the right ventricle.

DR. HIRSCH replied that these cases are peculiar, because of the existence of choked disc, absence of patellar reflexes, and the peculiar rhythm of the heart.

A CASE OF PROGRESSIVE MUSCULAR ATROPHY.

DR. FREDERICK PETERSON presented a case of this kind. It was that of a girl of eighteen years who, at the age of seven years, had an attack of measles, six months after which she began to drag the right foot, and shortly afterward the left. There is no hereditary taint of any kind in the family, and except the measles she has never had any disease peculiar to childhood. Her drop-foot led to the application of orthopedic treatment for several years, though the weakness and wasting in the legs below the knees grew gradually worse in spite of such treatment. Two years ago she noticed beginning wasting and weakness in the hands. She had never had any pains in the hands, arms, legs, or feet. Examination shows the condition at the present time to be as follows: Pupils and eye muscles are normal. There is slight scoliosis; shoulder and arm muscles well developed and normal; thigh and hip muscles well developed and normal. She presents double *main en griffe* and double talipes varus with drop-foot. There is reaction of degeneration in all the intrinsic muscles of both hands, and in the

muscles of the legs below the knees. There are no sensory changes whatever. The plantar reflexes are present. The knee-jerks are absent. She sways on standing. There is no incoordination of the muscles. Her general health is excellent. She presents, therefore, all the typical features of the peroneal form of progressive muscular atrophy; *vis.*: perfect preservation of the general health, remarkable contrast between the tapering wasted extremities and the well-developed muscles about the extremities where they are attached to the body, protrusion of the internal femoral condyles, garter-like atrophy of the legs below the knee-caps, talipes varus, *main en griffe*, fibrillary tremor, equine gait, and a tramping movement on standing in one one place (like a horse in a stall). There are fewer than sixty cases of this form of progressive muscular atrophy on record, and some of these, at least, are not genuine, but probably poliomyelitis. The seven autopsies recorded show that the lesion is a multiple neuritis, so that this—the Charcot-Marie-Tooth form—is a connecting link between the Duchenne-Aran or spinal type of progressive muscular atrophies and the primary muscular dystrophies.

DR. SACHS said he believed he had been first in America to describe this disease. He had first seen it in two brothers, and the cases had been published in *Brain* in 1890. He had proposed at that time to regard the disease as the "leg" type in contradistinction to the "hand" type of progressive muscular atrophy. Only two months ago another case came under his observation. In almost all of the reported cases the extensor muscle of the great-toe was the first part affected. The last autopsy reported, one made by Oppenheim, showed that there is positively no change in any part of the central nervous system, and that it is after all a disease of the muscles—in other words, that it may be as closely allied to the dystrophies as to the spinal diseases.

A CASE OF PROGRESSIVE MUSCULAR DYSTROPHY.

DR. W. H. CASWELL presented a man, twenty-seven years of age, a silk weaver by occupation. His family history is negative. For some years he had had weakness of the arms. There is no history of serious illness or of syphilitic infection. Examination shows a decided hollowing of the thorax in the infraclavicular region, and the shoulders are carried more forward and inward than usual. Some of the muscles about the arm and shoulder are atrophied and others hypertrophied. He can only extend the arms laterally to the horizontal, but another person easily raises them above his head. The right half of the face presents a flatness and weakness. Electric examination shows faradic contraction in all the muscles, though diminished in those which are atrophied. There is no reaction of degeneration anywhere. The case, therefore, is one of progressive muscular dystrophy of the facio-scapulo-humeral type.

DR. L. STIEGLITZ said that he had had this case under observation for some months. He wished to direct attention to the changes around the orbit. The palpebral fissure on the left side is larger than on the right. At times, if the patient looks down, the lid of the left eye

will not immediately follow the movement of the eyeball—Gräfe's symptom. In these cases he thought the face was involved very much oftener than Erb originally believed. When the face is involved, it is not usually affected symmetrically—an important point in differentiation.

BLINDNESS FOLLOWING CRYING.

DR. W. B. NOYES presented a little girl of eight years, having a negative family history. Four years ago, after a good deal of crying, the sight began to fail, and in four months she was blind. The child had had headache, right internal strabismus for a few weeks, and occasional vomiting, but no fever. Examination showed double optic atrophy. With the symptoms just narrated a clinical picture is formed which might have been taken for that of a brain tumor. The vision is reduced to the mere perception of light. The child is in good general health. His own idea is that the child originally had a subacute meningitis, which gradually involved the optic nerves.

DR. W. M. LESZYNSKY said that primary optic atrophy is very rare in children, and he is, therefore, inclined to believe that a localized basilar meningitis had been the primary condition. Some years ago he had presented to the Society a case showing this form of meningitis, although it did not involve the eyes. The cases are not very uncommon, and are liable to follow the exanthemata. At the time of reporting his case, he had referred to the one reported by Hobb of Zurich, in which the diagnosis had been confirmed by autopsy.

DR. MARY PUTNAM JACOBI asked if the presence of tubercle could be entirely excluded.

DR. NOYES replied that he could not bring himself to believe that this child had tuberculosis, but that she had been infected with syphilis is barely possible.

TORTICOLLIS SUCCESSFULLY TREATED WITH CONIUM.

DR. GRAEME H. HAMMOND presented a young man who had developed torticollis during last March, and in whom the spastic condition was still present when he first came under observation during September of last year. The patient was now taking 90 drops of the tincture of conium three times daily, and exhibited none of the toxic symptoms of the drug. No improvement had been observed until the dose had been increased to about 40 minims three times daily.

DR. H. ALLEN STARR said that he had had a case which was very much improved by the same treatment after the dose had been increased to 30 minims three times daily.

DR. W. H. THOMSON said that a very prominent oculist had caused the death of a patient suffering from blepharospasm by giving him 25 drops of the tincture of conium.

DR. GRAY said that more than one fatal case from the use of this drug had been reported; the trouble seemed to be that it was impossible to obtain a stable and reliable product. If, therefore, he happened to secure a good preparation for a given case, he endeavored to continue the use of the particular specimen until the patient recovered.

DR. HAMMOND said that most of the fluid extracts of conium found in drug-stores are almost inert. He always specified "Squibb's, and always began with a dose of 4 drops, and increased the dose by one drop daily. The system soon becomes tolerant of the drug.

AN UNUSUAL CASE OF RECURRENT MULTIPLE NEURITIS OF UNCERTAIN CAUSATION, WITH PARALYSIS OF THE PHRENIC NERVE.

DR. M. ALLEN STARR said that in cases of paralysis from multiple neuritis developing subsequently to the acute infectious diseases, there is rarely any tenderness along the nerves. It is only in the more severe cases that any cranial involvement is observed. Disturbance of respiration, from involvement of the diaphragm, is the rarest of all, and naturally is of the gravest significance.

The patient who forms the subject of the present report first noticed during 1892 a clumsiness of his hands, and shortly afterward he was unable to stand. There had been no preceding sore throat. Within three weeks he was unable to use his hands, walk, or stand alone. Control of the bladder and rectum was normal. During October, 1892, he was seen by Dr. Starr at St. Luke's Hospital, and then had total paralysis of all the muscles below the knees and elbows, with considerable atrophy of these muscles, and loss of faradic excitability. The trunk muscles had not escaped. There was partial wrist- and foot-drop, but no sensory disturbances. After a month he was able to go home, though he could not stand alone. In July he was reported as having fully recovered. In August, 1894, he was readmitted in about the same condition as at first. The second attack began during July of that year, with an almost total paralysis, as before. In September he developed a multiple neuritis. The next month he was able to leave the hospital, and the following April reported that he had regained complete power of all his muscles. On September 20, 1897, he came to Dr. Starr's office complaining of some numbness in the fingers and toes. There was slight anesthesia in the fingers up to the second joints. His appearance was that of a young athlete. In the course of a month there was absolute total paralysis of all the muscles of all the extremities, with rapid atrophy and loss of faradic reaction; he could not sit up, and his speech was noticeably thick. Early in October, while in the hospital, deglutition became affected; then the respiration suddenly became unnatural, and it was found that there was no spontaneous action of the diaphragm. This lasted two weeks, and he could sleep but little during this time because of the necessarily conscious effort at respiration. The diaphragm gradually resumed its functions during the following month and improvement advanced rapidly in all of the muscles. At the present time he is able to walk with the aid of crutches.

This case, Dr. Starr said, presented many of the features of diphtheritic multiple neuritis, yet he had not been able to find any recorded cases of this form of neuritis in which there had been a recurrence. Gowers states that involvement of the pneumogastric a second time in alcoholic neuritis is almost uniformly fatal. The causation of

the multiple neuritis in this case could not be easily determined. It is easy to rule out alcoholism. Diphtheria was suspected, but careful questioning failed to elicit any history bearing on this point. Cultures were made from the throat on several occasions, and bacilli were found, similar to the Löffler bacillus, but injections of these cultures into guinea-pigs gave entirely negative results.

DR. SACHS reported a case of recurrent multiple neuritis of syphilitic origin that he had had under observation for a number of years. The patient was a man, thirty-five years of age, temperate in all his habits, who had been married two years. There was a history of a syphilitic infection three years previously, in 1892. During October, 1895, he first noticed difficulty in going up and down stairs, and this was quickly followed by marked paresis of both lower extremities, considerable atrophy of the anterior thigh and also of the tibial muscles. The knee-jerks were entirely absent; there was no evidence of spasticity, and there was good control of bladder and rectum. Under a course of mercurial inunction improvement was immediate, and early in 1896 he was able to go about as well as before the illness began. The patient again consulted him in May, 1897, because of a slight left ptosis. This disappeared after a course of inunctions. In November, 1897, he complained of numbness in the left hand and fingers. Examination showed the power of the hand to be almost nil. There was gradual involvement of the musculo-spiral, median, and ulnar nerves, with loss of faradic response. All these symptoms pointed to the neuritic character of the affection. He had seen only one other case which at all resembled this one.

DR. HIRSCH asked if the spleen had been enlarged in Dr. Starr's case, and whether the blood had been examined for the malarial plasmodium. He recalled one case of multiple neuritis occurring from paludal infection, as demonstrated by the presence of the plasmodium in the blood. He had seen a case at Professor A. Fränkel's clinic, in which there were two attacks of multiple neuritis, finally ending in tabes. He thought a number of cases were on record in which tabes had been preceded by a history of multiple neuritis. This seemed to confirm the theory of Leyden, that tabes originates, not in the posterior columns, but in the ganglia.

DR. STARR replied that malaria had been excluded in his case by examination of the blood, and that the spleen had been of normal size.

DR. HAMMOND said that he now had under treatment a patient whose case is similar to the one reported by Dr. Starr. After having been in the hospital for a few days the patient's symptoms had all been aggravated, following two distinct paroxysms of intermittent fever, except that there was no return of the paralysis of respiration. This man had had chills and fever at intervals for fifteen years previously, and his original attack had occurred shortly after a paroxysm of this disease.

DR. MARY PUTNAM-JACOBI remarked, that in the last number of *Brain* Fleming had reported a case of multiple alcoholic neuritis, occurring in an alcoholic subject, in which at the end of three months there had been

involvement of the phrenic nerve, and death had ensued after six hours of most intense dyspnea. The autopsy showed a degeneration of the phrenic nerve, and also hemorrhages into the anterior horns of the spinal cord.

DR. FRAENKEL said that he had under observation two cases similar to the one reported by Dr. Starr. One entered the Montefiore Home about three years ago—a case of poisoning by snuff. He returned twice with a new and more severe attack. The second case was that of a man, forty-four years of age, who had had three attacks of multiple neuritis. Each time the relapse had followed his return to a house the walls of which were covered with green wall-paper, thus establishing a possible source of arsenic poisoning.

DR. SACHS said that he could recall one case of multiple neuritis, exactly like Dr. Starr's, in which intense dyspnea had been a prominent symptom, death occurring with unusual suddenness. In the case that he had just reported, the ptosis was mentioned simply to prove that the entire nervous system was affected by the syphilis; the ptosis might be due to peripheral disease.

BRAIN TUMOR—PRESENTATION OF A PATIENT AND OF A SPECIMEN.

DR. FRAENKEL presented a little boy, seven and one-half years old, in whom there was facial asymmetry—most noticeable when he smiled. The skull was also asymmetric, and there was enlargement of the cervical and inguinal lymph-nodes. There were no knee- or elbow-jerks, and the muscles of the right half of the body were more flabby than those of the other side. During July, 1896, he began to have attacks of vomiting and severe headache, and became dull and drowsy, and a right facial palsy developed. On examination, the right angle of the mouth was found to have dropped, and he had an ataxic-hemiplegic gait. He showed mental hebetude, and his speech was slow and stammering. There was distinct tumefaction of the right optic disc; the right facial nerve appeared paralyzed in all its branches, and the motor power of the right upper extremity was diminished. A diagnosis was made of subcortical brain tumor, probably in or near the optic thalamus. Mercurial inunctions and the internal administration of iodid of potassium soon caused improvement in all the symptoms. After three weeks the subjective and most of the objective symptoms had disappeared.

Dr. Fränkel then presented a brain, removed from a man twenty-nine years of age, who had been admitted to the Montefiore Home on August 20, 1895, suffering from pulmonary tuberculosis. There was a moderate lesion at the apex of each lung. Examination showed edema of the lower extremities, anemia, lesions of both lungs and enlargement of the liver. The skull was asymmetric. The most prominent feature was the facial expression; the left eyelid drooped and the eyeball was injected. The right facial nerve was found to be normal. The patient performed all the motor functions with the left facial nerve, and with unnecessary force. The tongue was dry and furred, and not tremulous. The knee-jerks were very much diminished. There was no ataxia. He was given mercurial inunctions, and iodid of potassium was admin-

istered internally. After two weeks he complained of vertigo, and developed a typical cerebellar gait. Treatment was continued three weeks longer, at which time most of the symptoms had disappeared. The diagnosis seemed to lie between meningitis and a tumor at the base of the brain—in the posterior fossa. The patient finally died in uremic coma. The autopsy was made by Dr. William Vissman. No abnormalities of the spinal cord or of the dura mater of the brain were found. At the base of the brain were a number of grayish-white nodules, the exact nature of which had not yet been determined. The anatomic diagnosis was tuberculous meningitis of the base of the brain, pulmonary tuberculosis, and the nervous affection was thought to be entirely functional. Tubercle bacilli were never found in the sputum.

Dr. Fränkel was of the opinion that the first case was specific, and that in the second the lesion was undoubtedly tuberculous. The specimen showed that it had, for the most part, disappeared.

REVIEWS.

LECTURES ON THE MALARIAL FEVERS. By WILLIAM SYDNEY THAYER, M.D., Associate Professor of Medicine in the Johns Hopkins University. New York: D. Appleton & Co., 1897.

So widely known is Dr. Thayer's original work in the study of the malarial fevers that a new contribution on the subject from his pen is quite likely to invite attention and interest. The reader of his lectures will not be disappointed. The subject is presented here with a facility born of actual knowledge, with a scientific instinct that is developed on the first page, and with a literary grace so charming that one is inclined to believe that the author's previous work will be eclipsed by the present.

Beginning with a thorough historic review of the literature of the disease, Dr. Thayer points out the poor choice of name for the malarial parasite, the "plasmodium malarie," and utters the hope that it may soon be permanently replaced by a title more appropriate. He emphasizes the necessity of knowing well the histology of the normal blood before attempting to study that of disease. He leads us next into the detailed methods of staining and studying malarial blood, and discusses the distribution and transmission of the parasite. It is interesting to note that the author doubts the transmission of the disease from mother to child, and he cites an instructive case in defense of his view. The clinical appearances of malaria, its sequelae and complications, are next considered, and are followed by a thorough discussion on treatment, a chapter which was, unfortunately, all too short in the monograph of Thayer and Hewetson, but whose excellence in the present work wholly atones for that omission. A chapter on general pathology and one on diagnosis complete the book.

The work of the Johns Hopkins school in setting aside "malaria" as a diagnosis of self-satisfaction will, in the course of time, be appreciated by the profession, and the present work can only tend to enhance this scientific effort.

The book is elegantly made and is illustrated by several temperature charts and by plates modified from the original ones published in 1895.

THERAPEUTICS: ITS PRINCIPLES AND PRACTICE. By H. C. WOOD, M.D., LL.D., Professor of Materia Medica and Therapeutics, and Clinical Professor of Diseases of the Nervous System in the University of Pennsylvania. Tenth edition. Philadelphia: J. B. Lippincott Company, 1897.

THAT Professor Wood's famous work should reach its tenth edition is no surprise to the thousands of physicians and students who have long regarded it as *the* American text-book on the subject of materia medica and therapeutics. It is so well known that any laudation of it will be superfluous.

The present edition has been brought thoroughly abreast of the times, the newer remedies finding such room as they seemingly deserve within its pages. The antitoxins, eucain, Schleich's infiltration anesthesia, for example, are well discussed, and every chapter shows the touch of Dr. Wood's wide reading and extensive learning. The tenth and succeeding editions will find an abundance of readers.

THE AMERICAN TEXT-BOOK OF OPERATIVE DENTISTRY. Edited by EDWARD C. KIRK, D.D.S., Dean of the Dentistry Department, University of Pennsylvania. Philadelphia and New York: Lea Brothers & Co., 1897.

THIS is a system by fifteen authorities on subjects relating to dentistry. Appended is a list of the contributors, with the subjects treated:

R. R. Andrews writes on the embryology and histology of the dental tissues; Henry H. Burchard, on plastic fillings, their properties, uses, and manipulations; including a history of amalgam, its physical properties, giving diagrams and tables of its shrinkage, expansion, etc.; the treatment and filling of root canals; the pathologic conditions which obtain, and the therapeutic agents and materials used in their treatment. Dento-alveolar abscesses, their causes, pathology and morbid anatomy, with diagrams by Dr. Black, together with the latest methods of treatment, are next considered. Local anesthetics and tooth extraction are the succeeding topics discussed.

Calvin S. Case discusses the development of esthetic facial contours, and William E. Christensen writes of inlays, the setting of porcelain cavity stoppers, the process of forming and fusing porcelain inlays by the use of the Downir crown furnace, and the Custer electric furnace. Dwight M. Clapp considers combination fillings. M. H. Cryer writes on the extraction of teeth and surgical anatomy of the maxillæ; the treatment of abnormalities, with instruments and accessories employed.

Edwin T. Darby is the author of the operation of filling cavities with metallic foils and their modifications. Clark L. Goddard discusses care of the deciduous teeth, and the character of the filling materials for the same. S. H. Guilford writes on the preparation of cavities, with descriptions of instruments used.

Louis Jack considers the examination of the teeth preliminary to operation, describing the methods, instruments, and appliances. Wedging and other methods of securing separation of teeth, including the exposure of cervical margins by slow pressure. The preparation of cavities and treatment of hypersensitive dentine by sedatives, obtundents, local and general anesthetics, is next described. Sterilization, with a consideration of the physiologic and therapeutic action of medicaments used, follows.

Edward C. Kirk writes on discolored teeth and methods of bleaching; Louis Outofy, on plantation of teeth; C. N. Pierce, on pyorrhea alveolaris; J. D. Thomas, on extraction of teeth under nitrous oxid anesthesia. The last chapter is by Alton Howard Thompson, on the microscopic anatomy of the human teeth, with diagrams of the types of the dental arch and occlusions of the teeth.

The work is handsomely and beautifully illustrated, and should be a valuable acquisition to every dental practitioner, being a thorough *résumé* of the subject of operative dentistry, written in a modern spirit by competent authorities.

THERAPEUTIC HINTS.

For *Chloasma*.—

℞ Hydrarg. bichlor.	. . . . .	gr. viii
Ammon. chlorid.	. . . . .	gr. xlviii
Spts. rect.	. . . . .	3 vi
Inf. hamamelidis	. . . . .	℥ iii.

M. Sig. Apply small compresses wet with this solution to pigmented spots.

For the Arrest of Acute Coryza at its onset, the following powder is recommended:

℞ Salol	. . . . .	gr. xv
Ac. salicyl.	. . . . .	gr. iii
Ac. tannici	. . . . .	gr. i
Ac. borici	. . . . .	℥ i.

M. Sig. Use hourly as a snuff for half a day.

For Gonorrheal Epididymitis.—Apply locally the following ointment:

℞ Guaiacol	. . . . .	3 ii
Lanolini	. . . . .
Resorbin	aa	3 iii.

M. Ft. ung. Sig. For external use.

A fifty-per-cent. solution of guaiacol in glycerin may be used instead of the above. After the inflammation is subdued it is advised to substitute ichthylol ointment as a resorbent.

For *Acne Indurata*.—

℞ Plumbi nitrat.	. . . . .	gr. xv
Ung. petrolati	. . . . .	℥ i.

M. Sig. Apply twice daily.

Administration of Cod-liver Oil.—The following formula is recommended by BRICEMORET:

℞ Ol. morrhuae	. . . . .	℥ vii
Syr. tolutani	. . . . .	℥ iiss
Tinct. tolutanæ	. . . . .	gtt. vi
Ol. caryophylli	. . . . .	gtt. i.

M. Sig. One tablespoonful two or three times daily. To be well shaken before using.